

# **Agilent G5761A SureScan Dx Microarray Scanner System**



## **User Guide**

**February 2014**

**For In Vitro Diagnostic Use**



**Agilent Technologies**

## Notices

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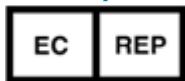
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### CAUTION

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**Intended Use:**

The SureScan Dx Microarray Scanner system, consisting of SureScan Dx Microarray Scanner with autoloader and Agilent Microarray Scan Control software, is intended to measure fluorescence signals of labeled DNA and RNA target hybridized to microarrays.

**Indications for Use:**

The SureScan Dx Microarray Scanner system is indicated for use in a clinical laboratory environment when measuring fluorescence signals of labeled DNA and RNA target hybridized to microarrays used as part of a validated diagnostic assay.

**Limitations for Use:**

The SureScan Dx Microarray Scanner system has been validated for use with Agilent G3 Gene Expression and Cytogenetic microarrays.

**Intended User:**

The SureScan Dx Microarray Scanner is intended for use by trained laboratory professionals working in a clinical laboratory environment.

**Notice:**

This manual is intended as a resource guide only. Each laboratory must establish their own operational protocols and procedures in accordance with local regulations and the requirements of the validated diagnostic assays they intend to perform.



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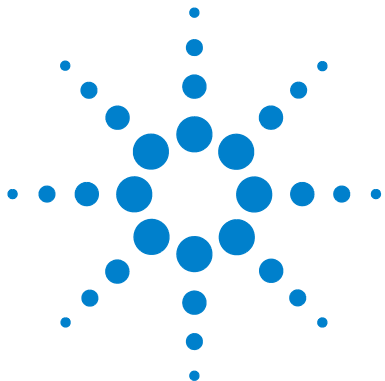
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# 1 Introduction

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This chapter provides a general introduction to the SureScan Dx system.



## Microarray Analysis

The SureScan Dx Microarray Scanner is part of the SureScan Dx Microarray Scanner system solution from Agilent Technologies. The SureScan Dx Microarray Scanner is a sophisticated laser-induced fluorescence scanner designed to read microarrays printed on standard 25.4 mm × 76.2 mm slides.

The SureScan Dx scanner measures the fluorescence intensity of labeled sample nucleic acid (DNA and RNA) bound to microarrays. Its ability to measure fluorescence from two dyes simultaneously facilitates all two-color microarray studies. This technology provides for rapid, high-quality, automated scanning of microarrays.



**Figure 1** SureScan Dx Microarray Scanner

Each slide is scanned in minutes, and the files are prepared for data analysis.

## System Description

In this section you find listings of hardware and software features, parts, and computer requirements. A physical description of the SureScan Dx scanner and information on site preparation and safety are also provided.

### Hardware and software features

The SureScan Dx scanner provides the following features:

- Dynamic autofocus
- Single and dual color scanning
- Automatic photomultiplier tube (PMT) gain calibration before each scan
- 2-, 3-, 5-, or 10-micron pixel size
- Dynamic range of  $>10^4$  for a single scan in 16-bit scan mode,  $>10^5$  for a single scan in 20-bit scan mode, and  $>10^6$  for a dual scan in 16-bit scan mode (XDR)
- Uniformity specification of  $<5\%$  CV (Coefficient of Variation)
- TIFF image file compression
- Flip and rotate images
- Internal and external barcode reading

The Agilent Dx Microarray Scan Control program allows you to select the dye (fluorescence) channels, scan regions, resolution, dynamic range, PMT gain, and output folders for each of the slides in the cassette. You can load these settings automatically from saved application-specific protocols, or set them manually in the slot table.

### Parts list

The G5761A SureScan Dx microarray scanner system consists of the following components:

- SureScan Dx Microarray Scanner with integral 24-slide cassette

- 24 slide holders
- Computer workstation with recovery software on CD
- Power cords and network cable
- Agilent Microarray Scan Control Software installed
- Agilent Installation Qualification Tool Software installed
- Declaration of Conformity

## Computer system requirements

The SureScan Dx system comes with a computer that meets or exceeds the following configuration. Agilent Technologies supports only the computer provided with the SureScan Dx system.

### Software

- Windows 7 64-bit Professional operating system

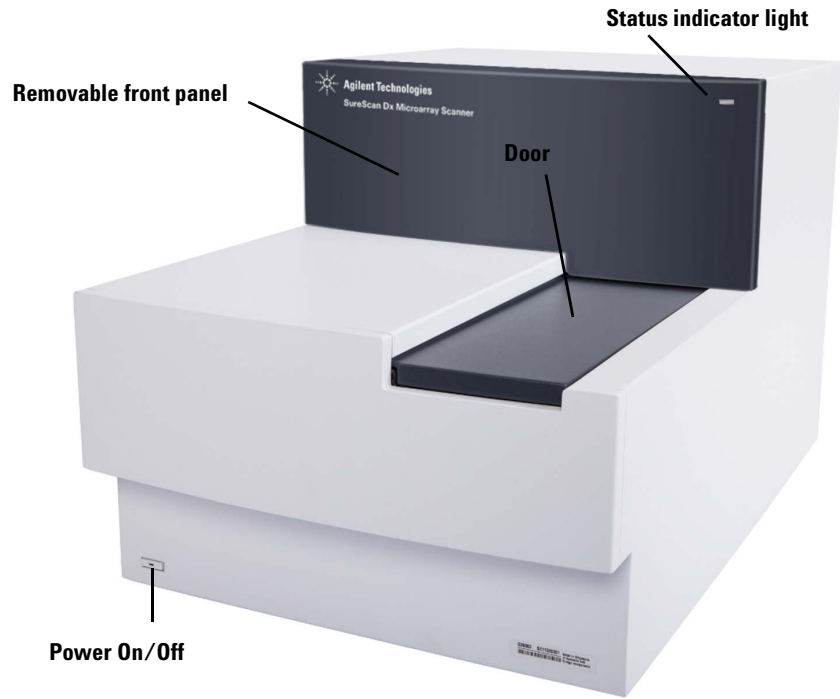
### Hardware

- Intel Core 2 Duo E8500 3.16 GHz or equivalent
- 8 GB RAM
- Minimum 250-GB hard disk. (Proper disk maintenance is required to ensure that you always have available disk space for data generation. See [Table 12](#) for estimated sizes of scanned images.)

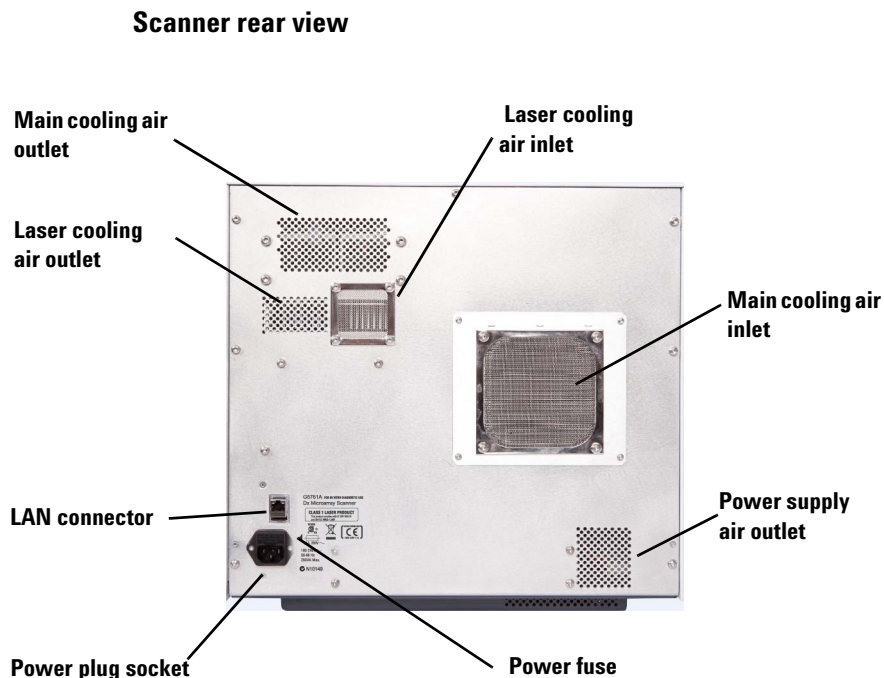


## Scanner physical description

### Scanner front view



**Figure 2** SureScan Dx Microarray Scanner, front view



**Figure 3** SureScan Dx Microarray Scanner, rear view

## Site preparation

Make sure that the environment meets the “[SureScan Dx Scanner Specifications](#)” on page 119 of Chapter 6. If you have any questions, contact your local Agilent sales and support center or [www.genomics.agilent.com](http://www.genomics.agilent.com).

## Safety symbols on scanner



### **PINCH POINT HAZARD symbol**

This symbol is placed on the product where there is potential to pinch hands or fingers. Keep hands clear of movable parts in this area.

## Safety guidelines

The SureScan Dx scanner is designed for safety and ease of use. Be sure that you understand and observe all the warnings and cautions before operating the SureScan Dx scanner.



### WARNING

**Do not attempt to repair or gain access to SureScan Dx scanner internal components. You risk exposure to high voltage and harmful laser radiation. Removing the main cover voids the warranty.**

---



### WARNING

**Connect the SureScan Dx scanner to a grounded power outlet. It relies on a protective earth ground for safety.**

---



### CAUTION

In order to minimize vibration due to the rapid scanning of the laser excitation across the microarray, install the scanner on a sturdy lab bench or table. Do not install the scanner in proximity to other lab equipment that might cause vibration.

---



### CAUTION

The SureScan Dx scanner is sensitive to condensing humidity conditions. Follow precautions stated in product documentation. See [“Preventative maintenance for the instrument”](#) on page 64 of Chapter 5 and the relative humidity specifications on [page 119](#) of Chapter 6.

---

## Principles of Operation

This section describes the operating features of the SureScan Dx Microarray Scanner.

### Slide positioning

The SureScan Dx scanner holds up to 24 slides in a nonremovable cassette. During scanning, the slides are sequentially transported into scanning position, scanned, and then returned to the cassette.

### Laser excitation

The SureScan Dx Microarray Scanner uses two lasers; a green diode-pumped solid-state laser (532 nm) and a red diode laser (640 nm). The lasers excite Cyanine-3 (Cy-3) and Cyanine-5 (Cy-5) labeled RNA or DNA to measure fluorescence after hybridization of the target nucleic acid to the microarray probes.

The SureScan Dx Microarray Scanner is optimized for high signal-to-noise performance in the Cy-3 (550 – 610 nm) and Cy-5 (650 – 750 nm) emission bands. It has a wide dynamic range and low spectral crosstalk, allowing for measurement of a broad range of target concentrations and for higher data confidence at lower signal levels.

### Scanning

The laser excitation is scanned rapidly back and forth across the microarray. The dynamic autofocus ensures that the microarray is always positioned in the focal plane of the scan lens, resulting in a uniform and calibrated-intensity scan.

## Fluorescence detection

Fluorescence from the labeled samples is converted to an electrical signal by a high-performance PMT. Very low noise amplifiers and digital integrators process the PMT signal into a digital measurement that is recorded in the TIFF file.

## Programs Installed on the Computer Workstation

The computer that is included with your SureScan Dx system has the following software programs preinstalled.

**Agilent Microarray Scan Control program** – used to set up and operate the scanner.

**Agilent Installation Qualification Tool program** – verifies that the Scan Control program was installed correctly and was not corrupted after installation. Produces an Installation Qualification Report for your records.



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This chapter describes how to operate the scanner, including how to set up and scan your slides quickly and easily.

If you have any problems, see [Chapter 5](#) for troubleshooting information.



## Licensing

### Redeeming your high-resolution scanning license

To redeem your high-resolution scanning license:

- 1 Locate the software entitlement certificate (SEC) that was shipped with the scanner.
- 2 Go to <https://software.business.agilent.com/index.stm>.
- 3 Select **Click here to start software license redemption**.
- 4 Follow the instructions to redeem your license.

### Installing your high-resolution scanning license

When you have received your license via e-mail message, install the license as follows:

- 1 Close the Scan Control program.

Locate the license file and place it in the program folder: C:\Program Files (x86)\Agilent\ScanControl

- 2 Restart the Scan Control program.



## Step 1. Turn on the SureScan Dx Microarray Scanner and start the Scan Control program

## Operating the Scanner

The following steps explain how to operate the scanner. For more information on how to use the Scan Control program, see [Chapter 3](#), “Using the Scan Control Program”.

### Step 1. Turn on the SureScan Dx Microarray Scanner and start the Scan Control program

*To learn how to set up the lasers to turn on and off automatically, see “To set the laser saver delay” on page 60.*

- 1 Turn on the SureScan Dx scanner using the power switch on the front of the instrument. The SureScan Dx scanner loads and initializes its firmware.
- 2 Turn on the computer workstation and wait for it to boot up.
- 3 Double-click the **Agilent Microarray Scan Control** icon to start the Scan Control program.

Or

Select **Start > All Programs > Agilent > Agilent Microarray Scan Control**.



**Figure 4** Agilent Microarray Scan Control icon

When the program starts, the Agilent Microarray Scan Control program main window opens and the scanner performs its initialization sequence.

- The Scan Control program communicates with the scanner via the LAN cable, sending commands and parameters, and receiving status and data.
- The lasers turn on and start to warm up.
- The autoloader initializes and performs a slide eject cycle (to make sure that no slide is currently in the autofocus).

## 2 Getting Started

### Step 1. Turn on the SureScan Dx Microarray Scanner and start the Scan Control program

#### NOTE

If the scanner has 24 slides loaded when you turn it on, the initialization will fail because it cannot perform the slide eject cycle.

- The scanning system is initialized and the data acquisition system is calibrated.

After the initialization sequence finishes, the Open Door button is enabled and you can load slides.

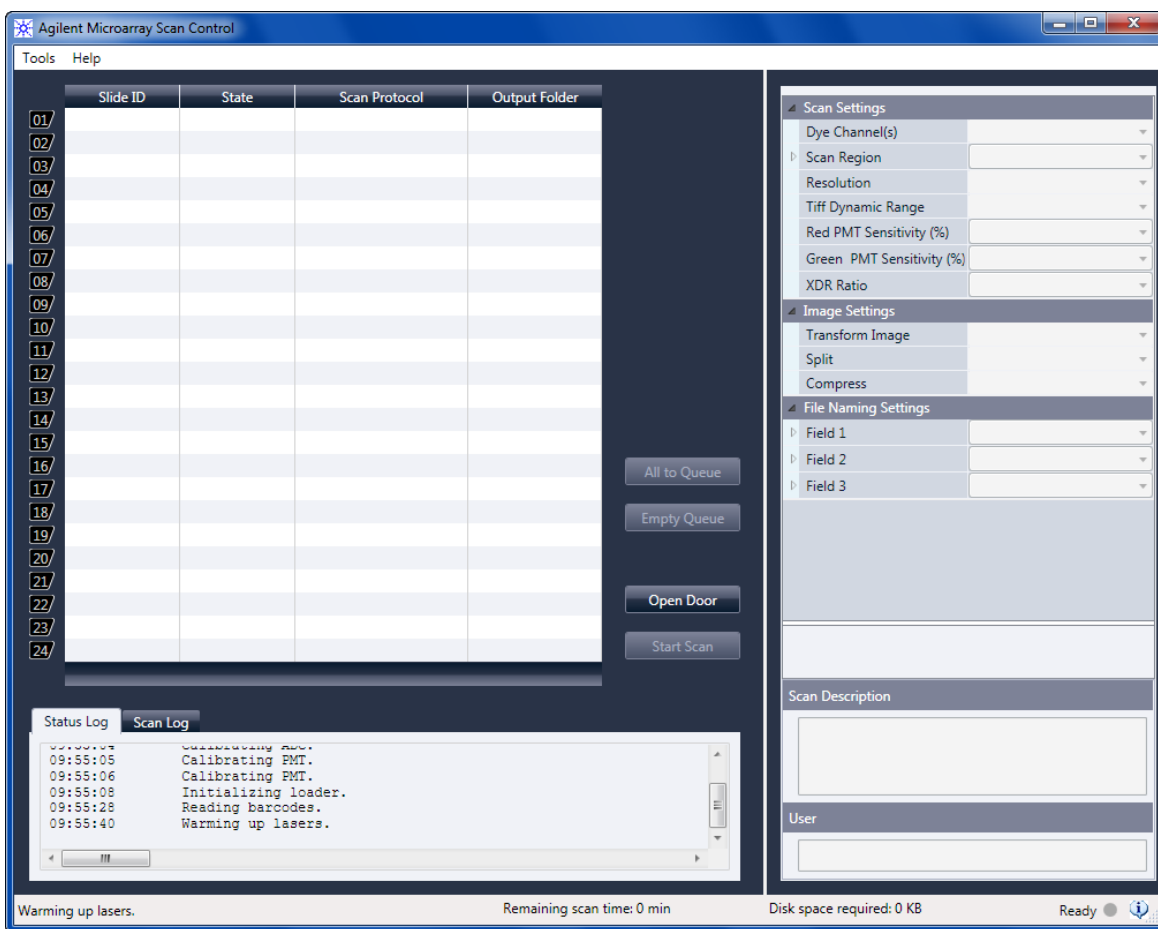


Figure 5 Agilent Microarray Scan Control program window – ready to add slides

## Step 2. Insert slides into slide holders

The status of the scanner is indicated at the lower right corner of the Scan Control window, in the status bar.

<b>Initialize</b>	The scanner is initializing. When the initialization is finished, the Open Door button is enabled, and the lasers continue to warm up.
<b>WarmUp</b>	The lasers take up to 5 minutes to warm up. During warm-up, you can load slides, set protocols, and add slides to the queue. Once the lasers are warmed up, you can start scanning.
<b>LasersOff</b>	Indicates that the lasers are turned off.
<b>Ready</b>	You can load slides or begin a scan.

**NOTE**

You cannot start scanning until both lasers are warmed up, at least one slide is in the queue, and the scanner status is **Ready**.

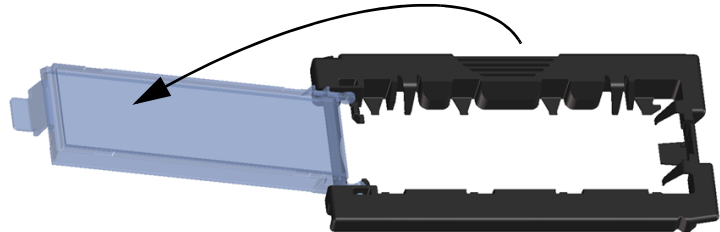
## Step 2. Insert slides into slide holders

A slide is inserted into a slide holder before loading it into the scanner.

*Fingerprints cause errors in the fluorescence detection. For accurate readings, touch only the edges of the slide and always use gloves when handling slides.*

*Do not write on the slides with markers or place any labels on the slide other than an appropriate barcode in the appropriate slide location.*

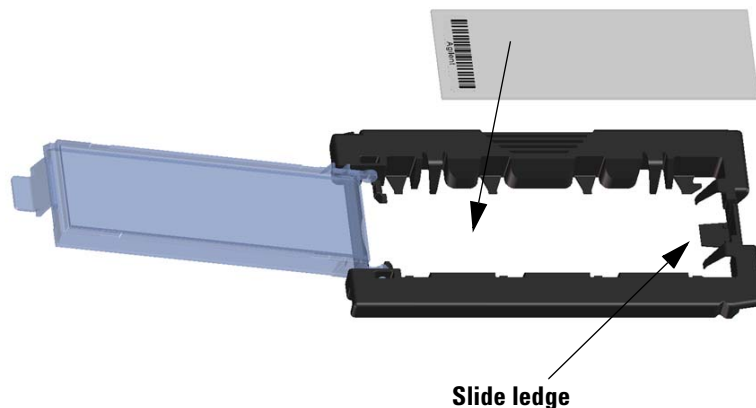
- 1 Before you insert the slide, place the slide holder on a flat surface, with the clear cover facing up, and the tab on the right. This helps to ensure that you have the slide aligned properly when you insert it into the slide holder.
- 2 Gently push in and pull up on the tabbed end of the clear plastic cover to open it.



**Figure 6** Opening the slide holder

## 2 Getting Started

### Step 2. Insert slides into slide holders



**Figure 7** Inserting slide into the slide holder

### 3 Insert the slide into the holder, as follows:

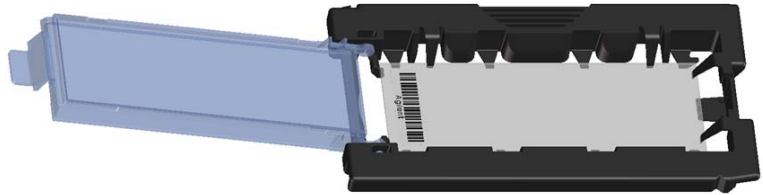
- a** Hold the slide at the barcode end.
- b** Make sure that the active microarray surface faces up, toward the slide cover, with the barcode on the left.
- c** Carefully place the end of the slide without the barcode label onto the slide ledge. See [Figure 7](#).
- d** Gently lower the slide into the slide holder. See [Figure 8](#).
- e** Close the plastic slide cover, pushing on the tab end until you hear it “click”. This moves the slide into position in the holder.
- f** Gently push in and pull up on the tabbed end of the clear plastic cover to open it again and verify that the slide is correctly positioned.  
  
Once inserted, the slide lies flat and matches up with the alignment points on the slide holder.
- g** Close the plastic slide cover, pushing on the tab end until you hear it “click”. See [Figure 9](#).



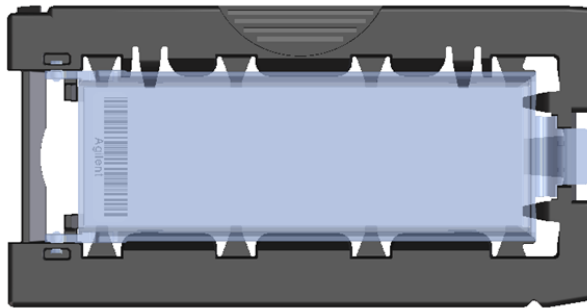
#### CAUTION

If the tab on the plastic slide cover is over-stretched, it may not properly “click” into place. Dispose of slide holders that no longer click when you close them.

## Step 2. Insert slides into slide holders



**Figure 8** Slide inserted in slide holder



**Figure 9** Slide holder – closed with slide

For instructions on removing the slides, see [“Step 7. Remove the slides”](#) on page 35.

Agilent slides have two barcodes, one on each side of the glass. See [Figure 10](#). Place the active microarray side of the slide facing toward the slide holder cover.

See [“Barcode and barcode label specifications”](#) on page 122 to apply a second readable barcode.

If you have a slide whose active surface is on the side opposite to the barcode, the scanner cannot read the barcode.

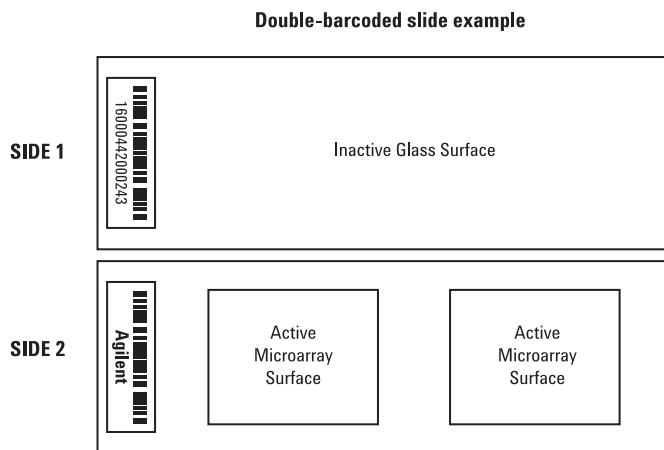


**CAUTION**

An improperly inserted slide can damage the SureScan Dx scanner.

## 2 Getting Started

### Step 3. Load the slide holders into the cassette



**Figure 10** Slide orientation

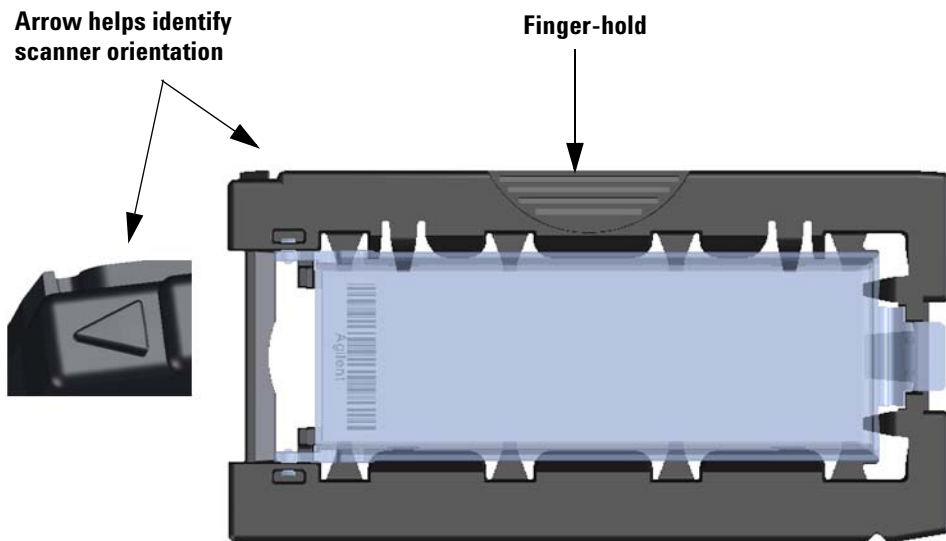
### Step 3. Load the slide holders into the cassette

When the slides are properly inserted in the slide holders, you can load the slide holders into the cassette. The cassette and slide holders are designed to ensure that the slide holders are inserted correctly.

#### **NOTE**

Do not load slide holders that do not contain slides into the SureScan Dx Microarray Scanner.

## Step 3. Load the slide holders into the cassette



**Figure 11** Slide holder helps you to insert slides correctly

- 1 In the Scan Control program window, click **Open Door** to open the scanner door.

**CAUTION**

The correct way to open the scanner door is using the Open Door button in the Scan Control program. Do not attempt to open the door manually.

- 2 Pick up the slide holder using the finger hold. The arrow on top of the slide holder points to the left when you pick up the slide holder correctly. See [Figure 11](#).

## 2 Getting Started

### Step 3. Load the slide holders into the cassette

*The SureScan Dx Microarray Scanner scans slides in the order set in the scan queue. The scanner skips over any empty slots. See “To add a slide to the scan queue” on page 42.*

Insert a slide holder into any open slot. The slot numbers are clearly labeled on the slide cassette. Do not force the slide holder into the cassette; it inserts easily if properly aligned with the finger-hold on top and the arrow facing to the left.



**Figure 12** Inserting slide holder into cassette

- 3 Make sure that the slide holder is seated in the bottom of the cassette slot.

The slot number for the loaded slide blinks blue.

- 4 Repeat steps 2 through 3 until all slide holders are loaded in the cassette.

The slide numbers next to the cassette and in the slot table of the Scan Control program window change color to indicate the state of the slot. For more information, see [Table 9](#) on page 92.



#### CAUTION

Improper placement of the slide holder in the cassette can result in severe damage to the SureScan Dx Microarray Scanner.

- 5 In the Scan Control program, click **Close Door**. The following events happen:



## Step 4. Set or change protocol scan settings

*For information on how to map scan protocols to slide designs, see “To map a scan protocol to a slide design” on page 61.*

- The scanner door closes.
- The scanner reads the barcode for each slide.
- The barcode is displayed under Slide ID in the Scan Control software slot table.
- Default output folder is applied.
- For slides that have a scan protocol mapped to their design, the scan protocol is assigned in the Slot Table, and the slot State changes to “Ready for queue.”

For slides that do not have a scan protocol mapped to their design, the scan protocol remains empty and the slot State remains “Present”. Assign a scan protocol, as described in “[Step 4. Set or change protocol scan settings](#)”. For more information on the Scan Control program main window, see “[Scan Control Program Window Reference](#)” on page 86.

**NOTE**

You can add slides to the cassette while a scan is in process. See “[About Adding Slides](#)” on page 118.

## Step 4. Set or change protocol scan settings

*The current scan protocol settings are displayed for each selected slide in the right pane of the Scan Control software main window. For more information on these settings, see “[Scan Control Program Window Reference](#)” on page 86.*

The first time you set up to scan a slide, select a scan protocol to use. See “[About Scan Protocols](#)” on page 36. Once the slide is scanned, the program remembers that scan protocol and assigns it to all slides with the same microarray design. You can change these assignments later. You can also manually set scan settings for a selected slide.

- 1 For each slide in the slot table, click the Scan Protocol and select a scan protocol to use for scanning the slide. See “[About Scan Protocols](#)” on page 36 and “[To set or change the scan protocol](#)” on page 41.
- 2 (Optional) For a selected slide, in the scan settings pane, change one or more scan settings to use for scanning only that slide. See “[Changing Slide Scan Settings](#)” on page 45.

## 2 Getting Started

### Step 5. Add slides to the scan queue

#### Step 5. Add slides to the scan queue

*Once you add a slide to the scan queue, you cannot change its scan settings. To change the scan settings, remove the slide from the queue.*

*To add a slide to the scan queue, its State must be "Ready for queue."*

- 1 In the Scan Control main window, click **All to Queue** to add all slides in the slot table with a State of "Ready for queue" to the scan queue.

A confirmation dialog box appears. Click **Yes** to add the slides to the queue.

OR

In the Scan Control slot table, click the **State** cell for the first slide to scan and click **Add to Queue**.

- 2 For each additional slide you want to scan,
  - Click the **State** cell and select **Add to queue first** to add the slide to the top of the scan queue.

OR

- Click the **State** cell and select **Add to queue last** to add the slide to the bottom of the scan queue.

As each slide is added to the queue, its **State** indicates that it is in the queue and the order in which the slide is scanned. (In queue 1, In queue 2, for example.) The status indicator light changes to solid blue.

#### Step 6. Scan your slides

- 1 If necessary, in the Scan Control main window, click **Close Door**.

Wait until the door closes and the **Start Scan** button is enabled.

- 2 In the Scan Control main window, click **Start Scan** to begin scanning the slides that were added to the queue. The scanner scans the slides in their order in the scan queue. See "[Step 5. Add slides to the scan queue](#)" on page 34.

During a scan, you see the following:

- The slot status indicator light for the current slide blinks green during the scan process, and the scan progress (for example, Scanning 50%) is displayed in the slot State.

- The remaining scan time and required disk space are displayed at the bottom of the Scan Control main window. See “[Scan Control Program Window Reference](#)” on page 86.
- Events during the scan are logged in the Scan Log and Status Log. See “[Log tabs](#)” on page 97.

## Step 7. Remove the slides

When the Open Door button is enabled, you can unload the slide holders from the cassette and then remove the slides from the slide holders.

*If the **Open Door** button is not available, you cannot open the door. Check to make sure that the scanning process is finished.*

- 1 In the Scan Control main window, click **Open Door** to open the scanner door.
- 2 Open the scanner door and remove the slide holders from the cassette.
- 3 Remove the slides from the slide holders, as follows:
  - a Hold the slide holder on the sides with the Agilent logo facing up.
  - b Gently push in and pull up on the tabbed end of the clear plastic cover to open it.
  - c Push up on the barcode end of the slide from underneath the slide holder to avoid fingerprints on the sample area.
  - d Grasp the slide from the sides and remove from the slide holder.

## About Scan Protocols

A scan protocol is a collection of scan and image settings that, when selected, is applied to the slide as it is scanned.

Agilent supplies eight preloaded protocols for your selection and use with Agilent high density (HD) microarrays and Agilent G3 microarrays.

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-color gene expression microarrays
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-color gene expression microarrays
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-color gene expression microarrays
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-color gene expression microarrays
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP microarrays
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP microarrays
<b>AgilentHD_miRNA</b>	Agilent HD miRNA microarrays
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA microarrays

Select the predefined protocol that applies to your type of Agilent microarray.

## Offline Mode

If no instrument is available, the Scan Control program runs in “offline mode”. In this mode, you can create, import, and export scan protocols and scan regions. You can also open log files, display recent errors, set general settings, and map scan protocols to design IDs.

## Turning Off the SureScan Dx Scanner

- 1 In the Scan Control program window, make sure that the SureScan Dx Microarray Scanner is not scanning, ejecting, or loading a slide.
- 2 Click **Open Door** to open the scanner door.
- 3 Remove the slide holders from the scanner cassette.
- 4 Remove the slides from the slide holders.
- 5 Click **Close Door**.



### CAUTION

You cannot open the scanner door manually. Use the Open Door/Close Door button in the Scan Control program to open and close the door.

---

- 6 In the Scan Control main window, click the red X at the upper right corner to close the program. The lasers are turned off automatically when you close the program.
- 7 Turn off the power switch on the front of the SureScan Dx Microarray Scanner.



## 3 Using the Scan Control Program

Using the Slot Table 40

Changing Slide Scan Settings 45

The Scan Control program is used to control all features of the SureScan Dx Microarray Scanner, including setting and changing scan settings and protocols, starting and stopping scans, reviewing scan status, and troubleshooting.

This chapter describes how you use the Scan Control program to set up and run the scanner.



## Using the Slot Table

The slot table provides a display of the cassette and its contents. Once you load slides into the cassette and close the door, the Scan Control program reads the barcode for each slide and shows it as the Slide ID in the slot table. The numbers to the left of the table correspond to the slots in the scanner cassette. The color of the number indicates the status of the slot. For details on the Scan Control main window, see “[Scan Control Program Window Reference](#)” on page 86.

The topics in this section describe how to use the Scan Control slot table to prepare for scanning slides.

### To change a Slide ID

The Slide ID is used in the image file name. By default, it is the slide barcode read by the scanner. See “[Barcode and barcode label specifications](#)” on page 122 for information on barcodes.

Typically, the scanner automatically reads the barcode for a slide and displays it as the Slide ID in the slot table. To add or change the Slide ID in the table,

- 1 In the slot table, click the Slide ID cell for the slide you want to add or change. Cell editing is enabled only when the slot has a slide loaded and is not yet in the queue.
- 2 Type the new slide ID.

#### NOTE

After you change the Slide ID, move your mouse cursor over the Slide ID cell in the scan table to see the barcode for the slide. The barcode appears in a tooltip.



## To set or change the scan protocol

A scan protocol is a predefined set of scan settings. Several default scan protocols are provided with the software. See "About Scan Protocols" on page 36.

If no scan protocol is selected for a slide, or if you want to change the scan protocol,


- 1 In the slot table, click the **Scan Protocol** cell for the selected slide and then click again to show the list of available scan protocols.
- 2 Click a scan protocol from the drop-down list.

### NOTE

You cannot change scan protocols for slides in the queue.

## To change the output folder for a scan

The output folder is where the scanned image files for a slide are saved. By default, the output folder is D:\ScanData.

- 1 In the slot table, click the **Output Folder** cell for a slide.
- 2 Click the browse icon.  The Browse For Folder dialog box opens.
- 3 Browse to the location where you want to save the scanned image files for this slide, and click **OK**.

## To apply a selection to multiple slides

Within the slot table, you can select more than one slide and then make a selection for Scan Protocol and Output Folder.

- 1 In the slot table, click to highlight the first slide.
- 2 To select multiple contiguous slides, hold down the **Shift** key and then select a second slide.

All slides between and including the selected slides are highlighted in the slot table.

OR

To select a series of noncontiguous slides, hold down the **Ctrl** key and then click additional slides you want to select. Selected slides are highlighted in the slot table.

- 3 Within the last selected slide, select the Scan Protocol or Output Folder cell.

The selection is applied to all highlighted slides.

### 3 Using the Scan Control Program

#### To add a slide to the scan queue

#### NOTE

You cannot make changes to slides in the queue.

### To add a slide to the scan queue

- 1 In the slot table, click the **State** cell for the slide you want to add to the queue.
- 2 Click **Add to queue** (if no other slides are in the queue).  
OR  
Click **Add to queue first** to add the slide to the beginning of the queue.  
OR  
Click **Add to queue last** to add the slide to the end of the queue.

### To add all slides to the queue

- 1 In the Scan Control main window, click **All to Queue**.  
A confirmation dialog box appears.
- 2 Click **Yes**.  
All slides in the slot table with a State of “Ready for queue” are added to the queue, in the order they appear in the slot table.

### To move a slide in the queue

- 1 In the slot table, click the **State** cell for the slide you want to move.
- 2 Click again to show selections for the slide.
- 3 Click one of the following possible options to move the slide position in the queue:
  - Move to first** – Move the slide to the first position
  - Move to last** – Move the slide to the last position
  - Move up** – Move the slide up one position
  - Move down** – Move the slide down one position

## To remove a slide from the scan queue

- 1 In the slot table, click the **State** cell for the slide you want to remove from the queue.
- 2 Click again to show selections for the slide.
- 3 Click **Remove from queue**.

The slide is removed from the queue and its State changes to “Ready for queue.”

## To remove all slides from the scan queue

- 1 In the Scan Control main window, click **Empty Queue**.  
A confirmation dialog box appears.
- 2 Click **Yes**.

All queued slides are removed from the queue, and the State changes to “Ready for queue.”

## To open the scanner door

*You must use the Scan Control program to open the scanner door.*

*You cannot open the door while the scanner is loading or ejecting a slide.*

- In the Scan Control main window, click **Open Door**.

### 3 Using the Scan Control Program

#### To close the scanner door

## To close the scanner door

*You must close the door before you can start a scan. After the scan begins, you can open the door and add or remove slides.*

*You must use the Scan Control program to close the scanner door.*

- In the Scan Control main window, click **Close Door**.

## To start a scan

- In the Scan Control main window, click **Start Scan**.

The slot status indicator light blinks green during the scan process. The scan progress (for example, Scanning 50%) is displayed in the slot **State** cell.

## Changing Slide Scan Settings

When you select a slide in the slot table of the Scan Control main window, the scan settings for that slide are shown in the Settings Pane on the right side of the window. See [“Scan Control Program Window Reference”](#) on page 86. The values displayed are defined in the selected Scan Protocol for that slide.

There are two ways to change scan settings:

- Make one-time changes to the scan settings for a slide before it is added to the queue. These instructions are shown in the following sections.
- Select a different scan protocol or create a new one. See [“To create a scan protocol”](#) on page 48.

You can also apply setting changes to multiple slides. For information, see [“To apply a selection to multiple slides”](#) on page 41.

### To change settings for a single slide

*You can only change the scan settings for a slide when it is not in the scan queue. See [“To remove a slide from the scan queue”](#) on page 43.*

- 1 In the scan table, select the slide whose settings you want to change.
- 2 In the Scan Settings area, click the arrow next to the setting you want to change, and then select the new setting.

When you manually change a setting, the Scan Protocol for the slide changes to <Customized>.

- 3 When you are finished changing the settings, click the **State** cell and add the slide to the queue. See [“To add a slide to the scan queue”](#) on page 42.

For more information on all the settings, see [Chapter 6](#), “Reference”.

### 3 Using the Scan Control Program

To change settings for multiple slides

#### To change settings for multiple slides

*You can only change the scan settings for a slide when it is not in the scan queue. See “To remove a slide from the scan queue” on page 43.*

- 1 In the scan table, click to select the first slide whose settings you want to change.
- 2 Hold down the **Ctrl** key and then click to select other slides.  
OR  
To select a contiguous block of slides, click to select the first slide, and then hold down the **Shift** key and then click the last slide.
- 3 In the Scan Settings area, click the arrow next to the setting you want to change, and then select the new setting.  
When you manually change a setting, the Scan Protocol for the selected slides changes to <Customized>.
- 4 When you are finished changing the settings, add the slides to the queue. See “To add a slide to the scan queue” on page 42 or “To add all slides to the queue” on page 42.

#### To add a description for the slide

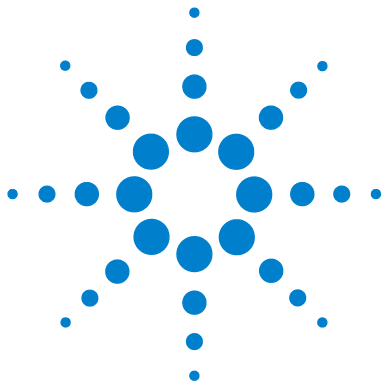
*You can only change the slide scan description for a slide when it is not in the scan queue. See “To remove a slide from the scan queue” on page 43.*

- 1 In the slot table, select the slide whose settings you want to change.
- 2 In the Scan Description area, type information about the slide and scan, as desired.
- 3 When you are finished typing the description, click the **State** cell and add the slide to the queue. (See “To add a slide to the scan queue” on page 42.)

#### To add a user name

*You can only change the user name for a slide when it is not in the scan queue. See “To remove a slide from the scan queue” on page 43.*

- 1 In the slot table, select the slide whose settings you want to change.
- 2 In the User area, type user information.
- 3 When you are finished typing the user, click the **State** cell and add the slide to the queue. (See “To add a slide to the scan queue” on page 42.)



## 4 Using Scan Control Tools

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The Tools menu in the Scan Control program provides general settings and functions that help with troubleshooting. Scan control tools let you

- Create or change scanner protocols
- Change the scanning region for slides
- Input barcodes
- Switch on and off lasers
- Display recent errors and log files
- Create a “snapshot” file of the current scanner state
- Reset calibration warnings
- Perform a self test
- Set general scanner settings
- Map protocols to slide designs

This chapter describes how to use the tools available in the Scan Control program.



## Creating and Changing Scan Protocols

The Scan Control program comes with a default set of scan protocols that are designed to work with typical Agilent microarray slide designs. See [“About Scan Protocols”](#) on page 36. You cannot change these default scan protocols. However, you can create a scan protocol by saving an existing protocol using a different name. You can then change the new scan protocol.

### To create a scan protocol

*You cannot modify a scan protocol that is currently assigned to a slide in the slot table.*

You can create a protocol from any existing protocol by saving the existing protocol with a new name.

- 1 Select **Tools > Scan Protocol Editor**.
- 2 Select an existing protocol that is similar to the scan protocol you want to create.
- 3 Click **Save As** to save the existing protocol with a new name. The Save As New Name dialog box appears.
- 4 Type a new name for the protocol, and then click **Save**. The scan protocol settings become active.
- 5 Change the scan and image settings as desired. For information on the available settings, see [“Scan Protocol Editor dialog box”](#) on page 104.
- 6 When you are finished, click **Save**.

### To change an existing scan protocol

*You cannot change the default scan protocols provided with the scanner. To change one of these scan protocols, save it with a different name first.*

- 1 Select **Tools > Scan Protocol Editor**.
- 2 Select an existing protocol you want to change.
- 3 In the Scan Protocol Editor dialog box, change one or more settings.
- 4 Click **Save**.



## To export a scan protocol

You can export one or more scan protocols to a file on your hard disk, as a backup, or to import on another SureScan Dx system.

**1** Select **Tools > Scan Protocol Editor**.

The Scan Protocol Editor dialog box opens.

**2** Click **Export**.

The Export Scan Protocol dialog box opens. A list of scan protocols in the program is displayed.

**3** Click to select a scan protocol to export.

OR

To select a series of contiguous protocols to export, click to select a scan protocol, and then hold down the **Shift** key and click another scan protocol.

OR

Click to select a scan protocol, and then hold down the **Ctrl** key and select additional noncontiguous protocols to export.

**4** Click **Export**.

The Save As dialog box appears.

**5** Browse to the location where you want to save the exported protocol file.

**6** Type a name for the exported protocol file, and click **Save**.

## To import a scan protocol

*If a scan protocol in the file has the same name as an existing scan protocol, the program does not import it.*

**1** Select **Tools > Scan Protocol Editor**.

The Scan Protocol Editor dialog box opens.

**2** Click **Import**.

The Open dialog box appears.

**3** Browse to where the exported scan protocol file you want to import is located. Exported scan protocol files have .exp extensions.

**4** Click to select the scan protocol file, and click **Open**.

The scan protocols in the file are imported.

## 4 Using Scan Control Tools

To remove a scan protocol

### To remove a scan protocol

*You cannot remove any of the default scan protocols or any scan protocols that are currently assigned to a slide in the slot table.*

- 1 Select **Tools > Scan Protocol Editor**.  
The Scan Protocol Editor dialog box opens.
- 2 In the Scan Protocol list, select a scan protocol to remove.
- 3 Click **Remove**.

## Creating and Changing Scan Regions

The *scan region* determines the area of the slide that is scanned. The larger the region, the longer the scan time.

You can create or change a user-defined custom scan region up to the maximum scan region of 71 mm x 21.6 mm. The new region appears as a selection in the slot table and in the Protocol Editor.

### To create a user-defined custom scan region

*Make sure that the scan region is at least 4 mm away from the barcode label and does not overlap any other opaque or translucent areas of the slide.*

- 1** In the Scan Control program menu bar, click **Tools > Scan Region Editor**.

The Scan Region Editor opens.

- 2** In the list next to Scan Region, select **New Scan Region**.

OR

To use an existing scan region as a template,

- a** In the list next to Scan Region, select one of the available scan regions.

- b** Select **Save As**.

The Save As New Name dialog box appears.

- c** Type the name for the new scan region, and then click **OK**.

The scan region settings become active.

- 3** Under Scan Region, type the measurements (in mm) for the region. If you type an invalid value, a red box appears around the measurement.

The red box at the top of the dialog box shows the scan region currently defined.

- 4** Click **Save**.

If no errors are found, the Scan Region Editor appears with the new region listed in the Scan Region Editor.

### To change an existing user-defined custom scan region

You can only change the user-defined custom scan regions that you created. You cannot change or remove the regions provided by Agilent.

## 4 Using Scan Control Tools

### To export a scan region

When creating a scan region or using existing scan regions, make sure that the scan region is at least 4 mm away from the barcode label.

- 1 In the Scan Control program menu bar, click **Tools > Scan Region Editor**.

The Scan Region Editor opens.

- 2 In the list next to Scan Region, select the scan region you want to modify.
- 3 Change the measurements for the region, as desired. For more information on the settings available, see “[Scan Region Editor dialog box](#)” on page 111.
- 4 Click **Save** to save the changes for the selected scan region.

### To export a scan region

- 1 In the Scan Control program menu bar, click **Tools > Scan Region Editor**.

The Scan Region Editor opens.

- 2 Click **Export**.

The Export Scan Region dialog box opens.

- 3 Click to select the scan region you want to export.

OR

To select noncontiguous scan regions to export, hold down the **Ctrl** key and then click additional scan regions.

OR

To select a contiguous set of scan regions to export, click to select the first scan region, and then hold down the **Shift** key and then click to select the last scan region to export.

- 4 Click **Export**.
- 5 The Save As dialog appears.
- 6 Browse to the location where you want to save the exported scan region file.
- 7 In File name, type the name for the exported scan region file.
- 8 Click **Save**.

## To import a scan region

*If a scan region in the file has the same name as an existing scan region, the program does not import it.*

- 1 In the Scan Control program menu bar, click **Tools > Scan Region Editor**.

The Scan Region Editor opens.

- 2 Click **Import**.

The Open dialog box appears.

- 3 Browse to where the exported scan regions file you want to import is located. Exported scan regions files have .exp extensions.

- 4 Click to select the scan regions file, and click **Open**.

## To remove a scan region

*You cannot remove any of the default scan regions or any scan region that is currently used in a scan protocol.*

- 1 Select **Tools > Scan Region Editor**.

The Scan Region Editor dialog box opens.

- 2 In the Scan Region list, select a scan region to remove.

- 3 Click **Remove**.

## Adding a Barcode

Barcodes are the means by which microarray slides are identified, both physically and within the Scan Control program. In addition, the barcode is saved in the metadata of the TIFF image, and is displayed in Feature Extraction reports.

### NOTE

By default, the scanner reads the barcode of a slide and displays it as the Slide ID in the Scan Control program Scan Table. If you change the Slide ID, you can still see the barcode of the slide by moving the mouse cursor over its Slide ID. The barcode appears in a tooltip.

## To add a barcode

*To add a barcode, you can use an external barcode reader or your keyboard to type the barcode.*

If, for some reason, the barcode of a microarray slide is not readable by the scanner, you can add it manually. To add a barcode manually, at least one slot of the cassette must be available.

- 1 If the scanner door is not open, in the Scan Control program main window, click **Open Door**, and wait for the door to open.
- 2 (Optional) If the barcode for a slide already in a slot is unreadable, remove the slide holder that contains the slide from the cassette.
- 3 In the Scan Control main window, click **Tools > Input Barcode**.  
The Input Barcode dialog box appears.
- 4 Use an external barcode reader or in the Barcode text box, type the barcode.
- 5 Insert the slide holder that contains the slide into the designated slot of the cassette.
- 6 Click **Set**.

In the Scan Table, the barcode is displayed in the Slide ID for that slot. The slot State changes to “Present.”

- 7 If desired, follow [step 3](#) through [step 6](#) to add another barcode.
- 8 When finished, click **Close**.

## Turning on Lasers Manually

The lasers are turned on automatically when you start the Scan Control program, or when you add slides to the queue. They turn off automatically, based on the Laser Saver Delay settings. See [“To set the laser saver delay”](#) on page 60. This section describes how to turn on the lasers manually.

### NOTE

Once the lasers are turned on, it takes up to 5 minutes for them to warm up before the instrument is ready to scan.

---

### To turn on lasers

- In the Scan Control program window, click **Tools > Switch on Lasers**.

The lasers are turned on. The Status Log displays “Warming up lasers” and the status bar displays “Warming up.”

When the lasers are warmed up, the status bar displays “Ready.”



## Troubleshooting Tools

To help with troubleshooting, you can display recent errors, or open log files that were generated for the scanner. You can also create a file that contains a “snapshot” of the current state of the instrument.

### NOTE

The troubleshooting tools described in this section are typically used when you are working with an Agilent technical support specialist.

### To display recent errors

- In the Scan Control program menu bar, click **Tools > Show Recent Errors**.

The LogMessages.txt file opens in Notepad (or your default text editor program).

### To display log files

- 1 In the Scan Control program menu bar, click **Tools > Log Files**.

The C:\ProgramData\Agilent\MicroArrayScanner\Logs folder opens with a list of log files:

ScanLog.csv – contains information about scan activity

SysLog-<datestamp>-<timestamp>.csv – contains information about system activity

ExceptionLog.txt – contains information about special conditions that affect the software execution

- 2 Double-click to select and open a log file.

Files with the .csv (comma-separated variable) extension are opened by default with an available spreadsheet program. These are read-only files. Files with the .txt extension are opened by default with an available text editor.

## 4 Using Scan Control Tools

To create a snapshot of the instrument state

### To create a snapshot of the instrument state

- In the Scan Control program menu bar, click **Tools > State Snapshot**.

A file is created in the C:\ProgramData\Agilent\MicroArrayScanner\Snapshots\StateSnapshots folder.

### To reset calibration warnings

During typical operation, the SureScan Dx Microarray Scanner calibrates the PMTs before every scan. It also calibrates the lasers during system initialization. If the calibration is unsuccessful, or if the calibration changes significantly since the previous time it was performed, the scanner software records this information, and generates warnings in the Scan Log.

The PMT calibration warning is set when the PMT gain changes by more than 20% from the previous calibration value.

The laser calibration warnings are set when the lasers cannot achieve their specified power within the warm-up period. If this problem occurs, the system sets the warning, and recalibrates the lasers at 80% of their specified power. The Scan Control program scales the TIFF file to compensate for the lower laser power.

If the next calibration is again unsuccessful, and the warnings reappear, contact your local Agilent sales and support center.

To reset calibration warnings,

- In the Scan Control menu bar, click **Tools > Reset Calibration Warnings**.

### To run a self test

*To run a self test, remove all slide holders from the scanner. The Self Test command is enabled when the scanner is "Ready" and the door is closed.*

- 1 In the Scan Control menu bar, click **Tools > Self Test**.  
The Self Test dialog box opens.
- 2 Click **Start**.

*The self-test does not test all subsystems or specifications. For a full retest, contact Agilent service for a preventative maintenance and scanner check.*

The self test examines various scanner subsystems to check for out-of-specification behavior. After the self test is finished, a summary of the results is opened in your internet browser.

# Setting up Scanner Defaults

## To set the default scan data folder

*By default, the scan data output folder is D:\ScanData.*

This location is the default output folder where the image files generated by the scanner are deposited. This file is shown by default as the Output Folder in the slot table. You can change the output folder manually for a scan before it is added to the queue.

- 1 In the Scan Control program menu bar, click **Tools > Settings**.

The Settings dialog box appears.

- 2 Next to Default Scan Data Folder, type the path for the folder where you want to save the scan images.

OR

Click **Browse** and browse to the location where you want to save the scan images, and then click **OK**.

- 3 Click **Save**.

Changes to the scan data folder setting are not applied to slides with barcodes already read by the scanner. To change the default setting for slides already in the slot table, open and then close the scanner door so that the scanner reads the barcodes again.

## To set the laser saver delay

*The lasers turn on automatically when you start the Scan Control program, and after you add scans to a queue. You can also turn them on manually. See “Turning on Lasers Manually” on page 56.*

The laser saver delay is designed to turn off the lasers automatically when not in use, to maximize the lifetime of the lasers.

- 1 In the Scan Control program menu bar, click **Tools > Settings**.

The Settings dialog box appears.

- 2 Next to Laser Saver Delay, select a value for the number of minutes the scanner waits after the last scan before it turns off the lasers.

- 3 Click **Save**.

## Mapping Scan Protocols to Designs

The first time you scan a microarray of a given design, the Scan Control program assigns, or “maps” the selected protocol to that design. After that, any time the Scan Control program recognizes a slide with the same design, the Scan Control program automatically fills in that scan protocol for the slide in the slot table. You can also assign scan protocols to slide designs manually.

### To map a scan protocol to a slide design

- 1 In the Scan Control program menu bar, click **Tools > Settings**.  
The Settings dialog box appears.
- 2 Click the **Design to Protocol Mapping** tab.
- 3 Under Design ID, type the Design ID number for the design you want to assign to the scan protocol. The Design ID is determined from an Agilent slide barcode. All barcodes start with 25. The following five digits are the Design ID. For example, the Design ID for barcode 251727810298 is 17278.
- 4 Under Scan Protocol, select a scan protocol to use for slides for the selected design.
- 5 (Optional) Under Description, type information about the protocol or design, as desired.
- 6 Click **Save**.

Whenever you add a slide that was manufactured with the mapped design, the program automatically uses the selected scan protocol in the slot table.

## **4 Using Scan Control Tools**

To map a scan protocol to a slide design



## 5 Maintaining and Troubleshooting Your System

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This chapter provides maintenance and troubleshooting information for the SureScan Dx system.



## Maintaining Your System

### Scheduled maintenance activities for hardware/software

Perform the maintenance activities in [Table 1](#) according to the recommended frequency to help maintain the performance of your computer workstation and operating system.

**Table 1** Scheduled maintenance for system software and hardware

Component	Maintenance activity	Frequency
Software	Check the disk space and archive data as needed.	Weekly
Software	Delete any temporary files (*.mp, *.tmp files) from the C:\Temp folder.	Weekly
Software	If sluggish performance is observed, defragment the hard disk using defragmentation software.	As needed
Hardware	Check all vents to ensure that they are not blocked by dust, debris, furniture, or other instrumentation.	Weekly

### Preventative maintenance for the instrument

On-going preventative maintenance checks (PM) must be performed by Agilent-trained service personnel in order to assure optimal performance of the instrument. Contact Agilent technical support to schedule PM services.

Visit [www.agilent.com/genomics/contactus](http://www.agilent.com/genomics/contactus) to find worldwide contact information for Agilent technical support.



## Tips to prevent problems

Follow these tips to help you maintain the SureScan Dx Microarray Scanner and its performance.

### Tips to avoid data loss

- Avoid running software programs that cause high CPU workload, that can affect the acquisition of data during scanning.

### Tips to avoid damage to the scanner

- Keep liquids and vapors away from the SureScan Dx scanner.
- Never place anything on the SureScan Dx scanner or on the scanner door.
- Minimize and control temperature fluctuations.

Do not place the SureScan Dx scanner in direct sunlight. Do not locate the SureScan Dx scanner near windows even if they have blinds or window coverings. The hot sun can heat up the SureScan Dx scanner housing in a nonuniform fashion, which can cause problems with the alignment of the optics.

Scan only when the laboratory temperature is consistent with the operating temperature specifications for the SureScan Dx scanner. To assure optimal SureScan Dx scanner performance, operate the scanner only in the specified temperature ranges. (See [“SureScan Dx Scanner Specifications”](#) on page 119.)

- Control the humidity.

The SureScan Dx scanner is sensitive to condensing humidity conditions. To ensure optimal performance, operate the SureScan Dx scanner only in the specified humidity ranges. (See [“SureScan Dx Scanner Specifications”](#) on page 119.) Always allow 12 hours thermal equilibration time on site before opening the shipping box.

## 5 Maintaining and Troubleshooting Your System

### Tips to prevent problems

- If the power cord needs to be replaced, use a power cord that is appropriately rated.

#### Tips to maintain hardware performance

- Avoid moving the SureScan Dx scanner.

If you must move the SureScan Dx scanner, there is a chance for adverse affects on performance. Call your local Agilent sales and support center for assistance in moving the SureScan Dx scanner.

- Place the SureScan Dx scanner on a sturdy lab bench or table.
- Avoid leaning on the SureScan Dx scanner.
- To extend the life of the lasers, set up your lasers to turn on and off automatically. See [“To set the laser saver delay”](#) on page 60.
- After turn-on, allow time for laser warm-up and stabilization. Typical warm-up time is less than five minutes.
- Do not use acetone or other solvents for cleaning.



#### **WARNING**

**Do not remove the main cover. Do not attempt to repair or gain access to internal components. You risk exposure to high voltage and harmful laser radiation.**

---

## Troubleshooting Your System

The SureScan Dx Microarray Scanner was designed for low maintenance and high ease of use. If you cannot resolve a problem with the system, read this chapter. If the problem still exists, contact your local Agilent sales and support center.

### Technical Support

Technical support is available for the SureScan Dx system. Read the rest of this chapter before calling your local Agilent sales and support center.

#### **SureScan Dx Microarray Scanner support**

If you have a problem with your SureScan Dx scanner that requires assistance from your local Agilent sales and support center, be prepared to provide the latest diagnostic log files created by the Scan Control program. To open the folder that contains the log files, in the Scan Control program main window, click **Tools > Log Files**. Log files are located in the folder C:\ProgramData\Agilent\MicroArrayScanner\Logs.

Each SureScan Dx scanner has a unique 10-character serial number. The serial number is located on the front of the instrument at the lower right and on the rear of the instrument.

When corresponding with your local Agilent sales and support center about your SureScan Dx scanner, be sure to include the model number and 10-character serial number.

Make a note of the serial number of your SureScan Dx scanner, the software version # and the installation date in the spaces shown (if you print this page) or on a sheet of paper that you keep close to your scanner.

**Scanner information**

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

Installation Date: \_\_\_\_\_

Software Version#: \_\_\_\_\_

Software Update Version#/Date: \_\_\_\_\_

Software Update Version#/Date: \_\_\_\_\_

**Find the version information for scanner software**

- 1** Select **Help > About** from the menu bar to find version information.
- 2** To close the program, click **OK**.

## Frequently Asked Questions (FAQs)

The following are frequently asked questions (FAQs) that can help you operate and maintain the SureScan Dx system and troubleshoot issues that occur.

**Table 2** FAQs

FAQ	Answer
I want to move the SureScan Dx Microarray Scanner to another area.	The move can adversely affect scanner performance. Call your local Agilent sales and support center for assistance in moving the scanner and assuring proper operation afterward.
Can I save files over the network while scanning?	Agilent recommends that you save your data files directly to the local hard disk. You can also save data files to a network folder. If a network access problem is experienced during the scan, data is saved to a temporary local folder, and a warning is included in the scan log.
Where do I find support information, such as drivers, guides, and troubleshooting solutions, for my computer workstation?	If you have a problem with your computer workstation, see the documentation that came with the computer. If you are still unable to resolve the problem, contact your local Agilent sales and support center.
Can I open the door to the scanner manually?	No. You must use the Open Door/Close Door button in the Scan Control program to open or close the scanner door.
The SureScan Dx Microarray Scanner is turned on and the Scan Control program is open, but the scanner does not scan.	<ol style="list-style-type: none"> <li>1 Close and then restart the Scan Control program. You must turn on the SureScan Dx Microarray Scanner before starting the Scan Control program. If you started the Scan Control program first, the connection is not made when the scanner is turned on.</li> <li>2 Contact your local Agilent sales and support center.</li> </ol>
I want to remove a slide from the scanner, but the Scan Control program will not let me open the door.	The Scan Control program prevents you from opening the door while it is loading or ejecting a slide. Wait until the Open Door button is available to open the door. If you continue to have problems, check the Status Log and contact Agilent technical support.

## Hardware Troubleshooting

Except for the power fuse, the SureScan Dx Microarray Scanner has no user-serviceable parts. The status indicator light on the front of the scanner indicates possible problems. You can also replace the fuses that protect the system. For any other problems, including jams, contact your local Agilent sales and support center.

### Troubleshooting with the status indicator light

The front panel has an indicator light that shows the status of the SureScan Dx Microarray Scanner.



**Figure 13** Location of the status indicator light

[Table 3](#) describes the possible states of the indicator light.

**Table 3** Scanner status indicator light states

Light state	Meaning/action required
Yellow	Scanner is initializing. The yellow light appears after you turn on the scanner, and also when the Scan Control program connects and initializes communication with the scanner.
Off	Scanner is fully initialized
Green	Scanning is in process.
Red	An error has occurred. Check the Scan Control Status log, Scan log, and list of recent errors, and then contact Agilent technical support.

### Checking and replacing scanner fuses

The SureScan Dx Microarray Scanner has two fuses for the power supply, on the rear of the SureScan Dx Microarray Scanner. The power supply fuses are directly above the power cord plug.

The fuses are ordered directly from Agilent Technologies.



### WARNING

**Always disconnect the power cord before checking or replacing the fuses.**

**Checking and replacing the power supply fuses** If you cannot turn on the SureScan Dx Microarray Scanner, even though the power outlet is active when tested, check, and replace the fuses if needed.

- 1 Disconnect the power cord.
- 2 Use a small flat-edge screwdriver to pry up the small plastic tab on the bottom edge of the fuse holder until it releases.
- 3 Pull out the fuse holder, and check the fuse integrity.

## 5 Maintaining and Troubleshooting Your System

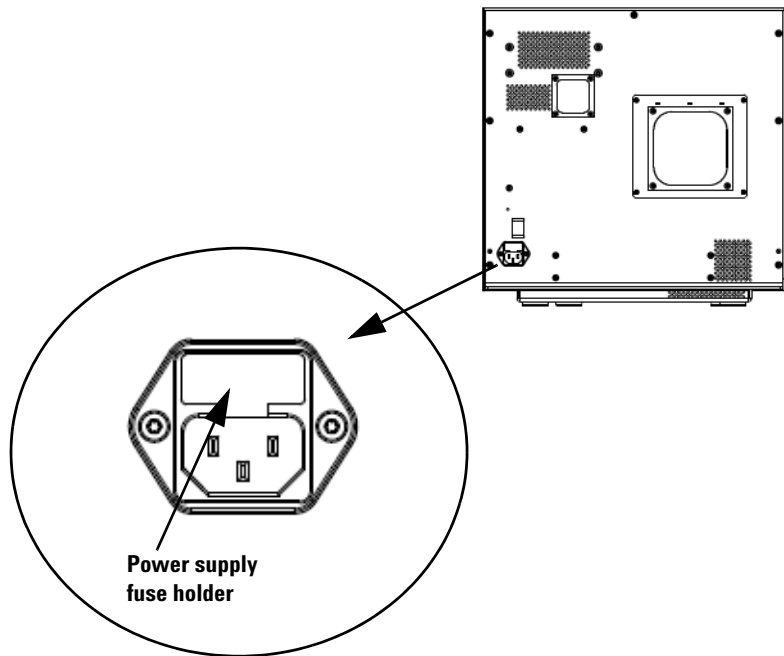
### Software Troubleshooting

- 4 If a fuse is blown, replace the fuse with a T4A, 250 VAC rated fuse (part number 2110-1491).
- 5 Push the fuse holder back in until it clicks into place.
- 6 Plug in the power cord.



#### CAUTION

Replace the fuses with only the same or equivalent rated fuses. If you are unsure about the fuses, contact your local Agilent sales and support center before installing.



## Software Troubleshooting

In case you experience a computer failure or you want to reload the hard drive image that Agilent ships with the computer, Agilent supplies a recovery CD that lets you re-image the hard drive.



## File locations

The SureScan Dx system uses the following folders:

### **Scan Control program files (installation folder)**

C:\Program Files (x86)\Agilent\ScanControl

### **Log files**

C:\ProgramData\Agilent\MicroarrayScanner\Logs

### **Scanned image files (default – otherwise as set in Scan Control Settings)**

D:\ScanData

### **Scanned image files (in case of failure to find a network storage location)**

If the Default Scan Data Folder set in **Tools > Settings** is not available, the program performs the following actions:

- Posts an error message in the Status Log
- Clears the Default Scan Data Folder set in **Tools > Settings**
- Sets the Output Folder in the Slot Table to  
C:\ProgramData\Agilent\MicroArrayScanner\Temp

## SureScan Dx system error messages

This section explains how to use error messages and error logs generated by the system.

### Hardware monitoring

The SureScan Dx Microarray Scanner continuously monitors internal temperatures and fan speeds, as well as fault conditions on many subsystems.

- If the monitored parameters reach warning levels, a message is displayed in the status log, and the instrument goes into a “scanning suspended” state. In this state, the currently running scan finishes, but no new scan starts.
- If the monitored parameters reach alarm levels, the instrument immediately stops scanning, and reduces its power consumption as much as possible.

To display details of the fault that shut down the instrument, in the Scan Control program, click **Tools > Show Recent Errors**.

### Where scanner error messages can appear

Error messages appear in the following places:

- Error messages appear in the Status Log in the Scan Control program main window. If the error can result in compromised data, it also appears in the Scan Log.
- Errors are also captured in greater detail in the system log file. System log files are saved as comma separated value files, with extension .csv. They can be opened with a text editor program (such as Notepad) or with Microsoft® Excel®. To open the folder where system log files are located, click **Tools > Log Files**.
- To display the most recent errors, click **Tools > Show Recent Errors**. The recent errors are opened in Notepad.

### Troubleshooting with error messages

The SureScan Dx system creates error messages to help you solve issues that arise. Many of the error messages include a solution within the text box; follow those instructions.

The following table contains some of the error messages that appear in popup dialog boxes, along with descriptions and suggested actions. If a problem continues after you try the suggested action, contact Agilent technical support.

**Table 4** Error messages in popup dialog boxes

Error message	Description and suggested action
A slide has been placed in the active slot (Slot number {*}). Remove the slide to allow scanning to continue.	A slide is currently in the active slot and the scanner cannot return the scanned slide to its slot in the cassette. No additional scans can take place, and Close Door is disabled. Remove the slide from the active slot.
Cannot connect to instrument: Firmware version is more recent than host software version. Firmware version: {*} Host software version: {*} Contact Agilent product support.	Instrument firmware does not match the Scan Control program version. Contact Agilent technical support.
Cannot connect to instrument: Verify firmware failed. {*} Contact Agilent product support.	Scan Control cannot communicate with the scanner due to a firmware problem and goes into offline mode. Contact Agilent technical support.
Check disk space failed: {*}	Occurs when you try to add a scan to the queue but there is not enough disk space for the scan to complete. Clean up your hard disk to provide adequate space for storage of scan files.
Configuration items are missing from config files. Cannot save.	Reinstall the Scan Control program.
Configuration items missing.	Reinstall the Scan Control program.
Error during shutdown: {*}	An error occurred when closing the Scan Control program. Restart the Scan Control program and try again.

## 5 Maintaining and Troubleshooting Your System

### SureScan Dx system error messages

**Table 4** Error messages in popup dialog boxes (continued)

<b>Error message</b>	<b>Description and suggested action</b>
Find log files failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.
Find recent errors failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.
Get 'About' information failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.
Initialize logger failed: {*}	Log file is open in another application. Close the log file and restart the Scan Control program.
Instrument is busy: Please wait for the instrument to become idle.	Occurs when you attempt a command that cannot be completed while the instrument is busy. Wait and try the action again.
Instrument self test failed: {*}	Reinstall the Scan Control program.
Load application configuration failed: {*}	Scan Control program installation is corrupt. Reinstall the Scan Control program.
Load instrument configuration failed: {*}	Scan Control program installation is corrupt. Reinstall the Scan Control program.
Load scan configurations failed: {*}	Scan Control program installation is corrupt. Reinstall the Scan Control program.
Load test script set failed: {*}	Reinstall the Scan Control program.
Open Online Support website failed: {*}	Web page is currently unavailable. Check your internet connection. Try again later.
Open Scanner Home Page website failed: {*}	Web page is currently unavailable. Check your internet connection. Try again later.
Open Users Guide '{*}' failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.
Recovering door jam failed: {*}	An error occurred when the instrument tried to recover from a door jam. Close the Scan Control software, restart the scanner, and then restart the Scan Control program.
Save instrument state failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.

**Table 4** Error messages in popup dialog boxes (continued)

Error message	Description and suggested action
Show 'About' information failed: {*}	Close the Scan Control program and restart it. If the problem continues, reinstall the Scan Control program.
Update firmware failed: {*}	Update of the instrument firmware failed. Contact Agilent technical support.

*\* Detail added when the message is generated*

The following table shows error messages that appear in the Status Log or Scan Log. When an error occurs, to display additional information, click **Tools > Show Recent Errors**.

**Table 5** Error message in logs

Error message	Description and suggested action
{*} State Machine unknown error during state '{*}': {*}.	Low-level error. Contact Agilent technical support.
Activity EjectSlide failed.	Multiple possible causes. Try restarting the scanner and Scan Control program. If the problem persists, contact Agilent technical support.
Activity InitLoader failed	Multiple possible causes. Try restarting the scanner and Scan Control program. If the problem persists, contact Agilent technical support.
Activity InitStages failed	Multiple possible causes. Try restarting the scanner and Scan Control program. If the problem persists, contact Agilent technical support.
Activity LaserWarmup completed with warnings	Lasers failed to warm up at calibrated power.
Activity LaserWarmup failed.	Lasers did not stabilize within a certain time.
Activity LoadSlide failed	Multiple possible causes. Try restarting the scanner and Scan Control program. If the problem persists, contact Agilent technical support.
AutoFocus hold percentage is more than warning limit	Dirt or obstructions on the slide; slide not installed correctly in slide holder.
Data system calibration completed with warnings	Indicates data system calibration failure. If the problem persists, call service.

## 5 Maintaining and Troubleshooting Your System

### SureScan Dx system error messages

**Table 5** Error message in logs (continued)

<b>Error message</b>	<b>Description and suggested action</b>
Data system calibration failed	Indicates data system calibration failure. If the problem persists call service.
Default scan data folder verification '{*}' failed: {*}	The default folder has been removed or cannot be accessed. Recreate it or fix the network connection.
Eject failed: unable to move slide into cassette.	Restart the scanner to attempt to clear fault.
Fanspeed error detected: Instrument operation halted	Hardware problem — contact Agilent technical support.
Fanspeed warning cleared: Instrument operation resuming	Hardware problem — contact Agilent technical support.
Fanspeed warning detected: Instrument operation suspended.	Hardware problem — contact Agilent technical support.
Find focus failed	Multiple possible causes. Try restarting the scanner and Scan Control program. If the problem persists, contact Agilent technical support.
General communication failure.	Check the LAN cable. Restart the scanner and the Scan Control program.
Green Laser power is not set to calibrated value	Laser power has been reduced. Compensation was applied to the output TIFF. The green laser may fail soon.
Green PMT calibration completed with warnings	Indicates PMT calibration completed successfully, but some of the values it calculated are not good.
Hardware error detected in subsystem '{*}':Instrument operation halted	Low-level error. Contact Agilent Technical support.
Hardware warning detected in subsystem '{*}':Instrument operation suspended	Low-level error. Check recent errors and contact Agilent technical support.
High temperature error detected: Instrument operation halted	Check ventilation slots.
High temperature warning cleared: Instrument operation resuming	Check ventilation slots.
High temperature warning detected: Instrument operation suspended	Check ventilation slots.
PMT calibration failed	Indicates PMT calibration failure. If the problem persists, call service.
Red Laser power is not set to calibrated value	Laser power has been reduced. Compensation was applied to the output TIFF. The red laser may fail soon.

**Table 5** Error message in logs (continued)

Error message	Description and suggested action
Red PMT calibration completed with warnings	Indicates PMT calibration issues. If the problem persists, call service.
Scan slide failed	Multiple possible causes. Click <b>Tools &gt; Show Recent Errors</b> for more information. Try restarting the scanner and the Scan Control program. If the problem persists, contact Agilent technical support.
State machine failure {*}	Low-level software error. Contact Agilent technical support.
Status communication failure	Check connection to instrument.
Suspending autoloader operation due to autoloader errors	Click <b>Tools &gt; Show Recent Errors</b> for more information.
Unable to access folder \"{*}\": Saving output file in folder \"{*}\"	Destination folder was not available during the scan.
Watchdog communication failure: {*}	Low-level error. If the problem recurs, call Agilent technical support.

*\* Detail added when the message is generated*

### If an error message does not appear in the table

This table does not list all the possible error messages. If you have an error message that is not listed and you are unable to resolve the problem, do the following:

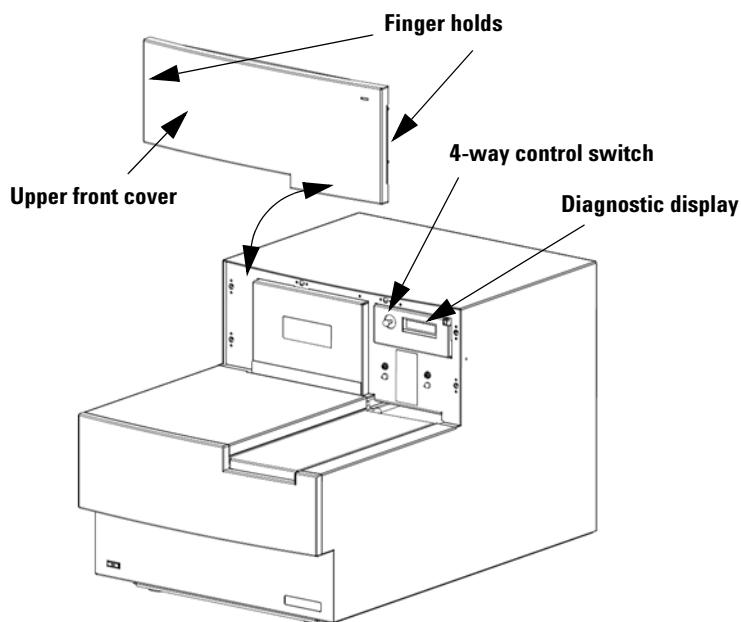
- 1 Write down the error message.
- 2 Restart the Scan Control program.
- 3 If step 2 does not solve the problem, do the following:
  - a Close the Scan Control program.
  - a Restart the computer workstation.
  - b Turn off the SureScan Dx Microarray Scanner, and then back on.
  - c Restart the Scan Control program.
- 4 If step 3 does not solve the problem, contact your local Agilent sales and support center.

## Using the Diagnostic Display

The SureScan Dx Microarray Scanner diagnostic display is used for advanced troubleshooting tasks. This display is located on the front of the instrument, behind the upper front cover. To open the cover, grasp the finger holds on the sides of the cover, and pull forward. You see the diagnostic display and a 4-way control switch.

**NOTE**

Use the diagnostic display switch only when requested by Agilent technical support.



**Figure 14** Diagnostic display location



The diagnostic display control switch has the following capabilities:

- Before Scan Control connects to the instrument, the display shows the IP address of the scanner. If the IP address is not displayed, the firmware is not running.
- Toggle the switch Up to cycle through a menu, with the following choices:
  - The first item lets you reset the IP address to factory default (10.0.0.2).
  - The second item lets you reboot the firmware. (The firmware is also reset by power cycling the instrument.)
- To perform the selected operation, move the switch to the right (to the Select position).
- Once the Scan Control program connects to the instrument, the display reads “Client Connected”.


# Updating the Scanner Firmware and Scan Control Program

Agilent Technologies occasionally makes software updates available. Firmware updates (if necessary) are included with the Scan Control program update. This section describes how to update the scanner program and firmware.

### NOTE

Updating of the scanner firmware or the Scan Control program may require revalidation of your in-house operational protocols and procedures. Refer to your laboratory operational policies for guidance.

## To check if an update is available

If an update for the Scan Control program is available, an Information icon appears at the lower right of the Scan Control main window:  Click the icon to display information about your installed version and the most recent version available.

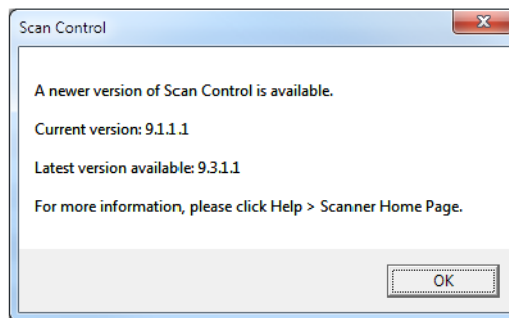


Figure 15 Update notification dialog box

## To update the Scan Control program and firmware

- 1 From the Scan Control main window, click **Help > Scanner Home Page**.

The Agilent Technologies Genomics – High Resolution Scanner Overview web page opens.

- 2 In the web page, click **Download Software**.

- 3 Follow the instructions to read the Release Notes and Installation Notes
- 4 Click **Download Software** to download the software installer and save it to your computer.
- 5 Start the software installer and follow the prompts to install the software. Accept the defaults. It is not necessary to remove the previous version of the software.

**NOTE**

Software updates do not overwrite scan regions, protocols, or the calibration of the instrument.

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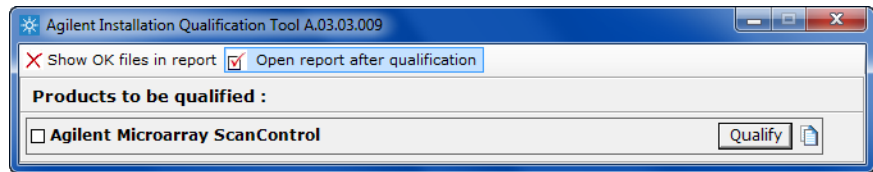
- 6 When the software installation is finished, start the Scan Control program.
- 7 If a firmware update is needed, a message appears, and the Scan Control program changes to Offline Mode.
- 8 Close the Scan Control program.
- 9 Turn off the power to the scanner.
- 10 Wait 10 seconds, and then turn on the scanner power.
- 11 Start the Scan Control program.

The Scan Control program and scanner firmware are now updated. If you have problems, contact Agilent technical support.

## To verify the software installation

The SureScan Dx system workstation includes an installation qualification tool (IQT). Use this program after updating your software to verify that the update installed correctly.

- 1 Click **Start > All Programs > Agilent Technologies > Installation Qualification Tool**.

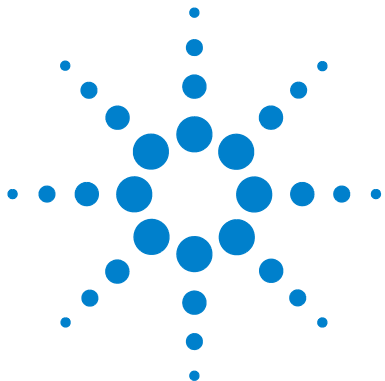


**Figure 16** Agilent Installation Qualification Tool dialog box

- 2 Select the box next to **Agilent Microarray Scan Control**.
- 3 Under Products to be qualified, click **Qualify**.

The installation is verified, and an installation qualification report is generated. If you selected **Open report after qualification**, the installation qualification report opens in your internet browser.

- 4 When finished, click the close button in the upper right corner of the program dialog box.



## 6 Reference

Scan Control Program Window Reference	86
Scan Control Program Dialog Box Reference	100
About Adding Slides	118
SureScan Dx Scanner Specifications	119
Slide Specifications	121
Regulatory Information	123

This chapter includes descriptions of the Microarray Scan Control program windows and dialog boxes. It also contains specifications and regulatory information.



## Scan Control Program Window Reference

This section describes the main window of the Microarray Scan Control program and its contents.

### Scan Control main window

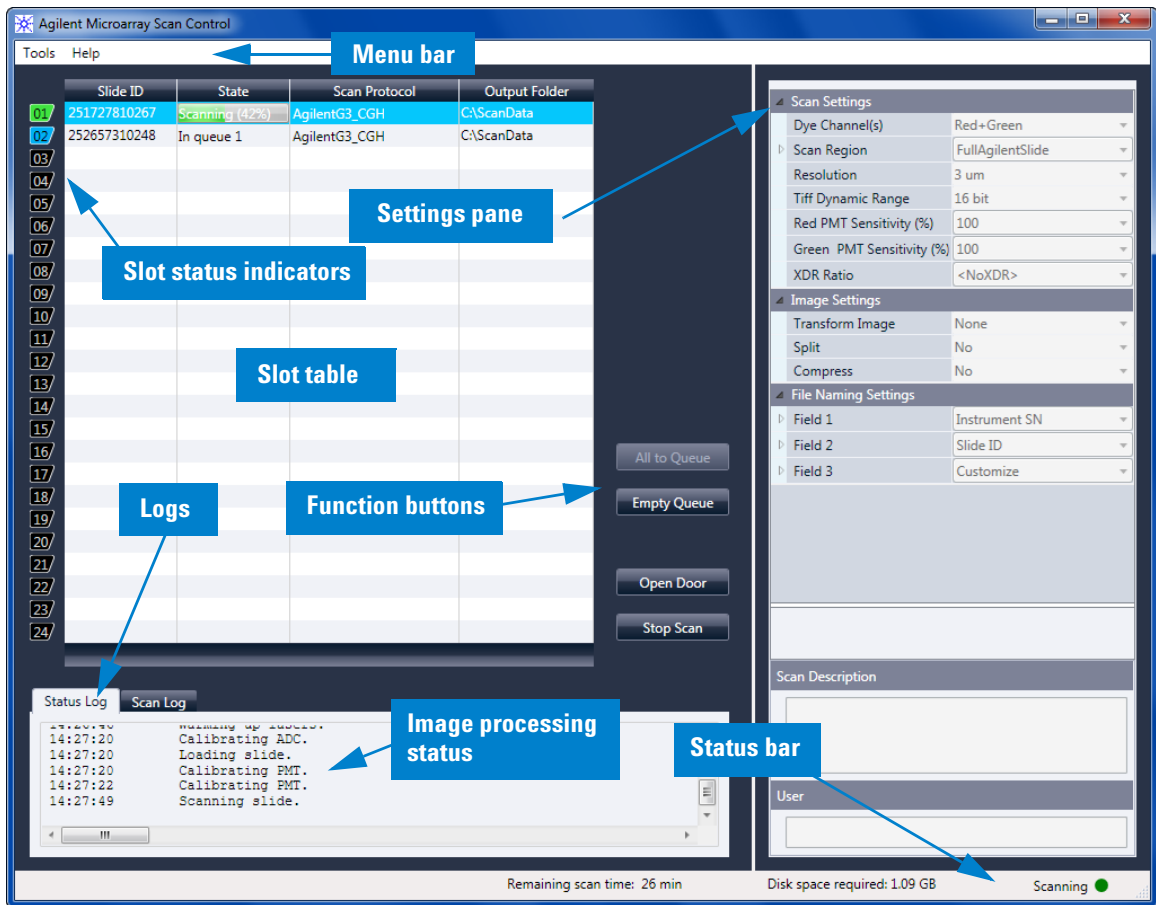


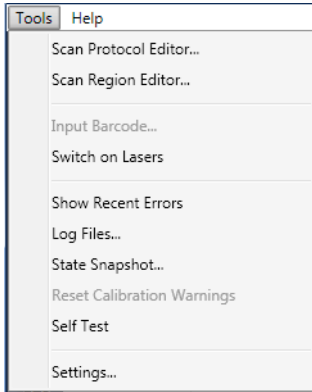
Figure 17 Agilent Microarray Scan Control main window

The Microarray Scan Control window appears when you start the Microarray Scan Control Program. It has the following features:

**Table 6** Scan Control window features

Feature	Description
Menu bar	Open tools menu and help.
Slot table	Display status, scan protocols, and output folders for microarray slides currently in the scanner.
Settings pane	Display settings for selected slide. For slides not in the queue, you can change settings from here.
Slot status indicators	Indicates the status of the slot. Matches the slot indicator lights on the cassette.
Function buttons	<ul style="list-style-type: none"> <li>• Add and remove slides from the scan queue</li> <li>• Open and close the scanner door</li> <li>• Start and stop a scan</li> </ul>
Logs	Display instrument and scan status logs.
Status bar	Show status of scanner, remaining scan time, and disk space required for the scan.

## Tools menu



**Figure 18** Tools menu

The following functions are available on the Tools menu:

**Table 7** Scan Control Tools commands

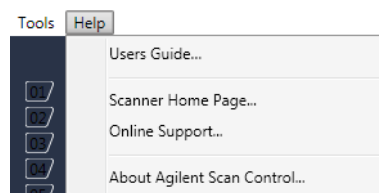
Tool	Description
Scan Protocol Editor	Opens the Scan Protocol Editor dialog box, where you can create, change, or remove scan protocols.
Scan Region Editor	Opens the Scan Region Editor dialog box, where you can create, change, or remove custom slide scan regions.
Input Barcode	Lets you use the keyboard or a "keyboard emulation" barcode reader to enter a barcode for a slide that does not have a barcode, or a when the scanner cannot read a barcode.
Switch on Lasers	If the lasers are off, use this command to turn on the scanner lasers.
Show Recent Errors	Opens notepad (or your default text editor) and displays details of the most recent errors.



**Table 7** Scan Control Tools commands

Tool	Description
Log Files	Opens the Logs folder, where you can open any of the logs created by the program.
State Snapshot	Creates a file that contains the status of the scanner at the time the snapshot was created. This file is helpful in troubleshooting.
Reset Calibration Warnings	Laser calibration warnings are set when the lasers cannot achieve their specified power within the warm-up period. If this problem occurs, the system sets the warning, and recalibrates the lasers at 80% of their specified power. Use this function to reset the warnings to default settings.
Self Test	The self test examines various scanner subsystems to check for out-of-specification behavior. After the self test is finished, a summary of the results is opened in your internet browser.
Settings	Opens the Settings dialog box, where you can set defaults and map scan protocols to microarray designs.

## Help menu



**Figure 19** Scan Control Help menu

The following commands are available in the Help menu:

**Table 8** Scan Control Help commands

<b>Item</b>	<b>Description</b>
Users Guide	Opens this guide in Adobe® Reader®.
Scanner Home Page	Opens the Agilent Technologies website for the SureScan Dx Microarray Scanner in your internet browser.
Online support	Opens the Agilent Technologies Technical Support web page, where you can find support information for your scanner.
About Agilent Scan Control	Displays version information for the Scan Control program and the serial number and model of your scanner.

## Slot table

	Slide ID	State	Scan Protocol	Output Folder
01	251727810267	Scanning (10%)	AgilentG3_CGH	CA\ScanData
02	252657310248	In queue 1	AgilentHD_CGH	CA\ScanData
03	251727810212	In queue 2	AgilentG3_CGH	CA\ScanData
04	251727810296	In queue 3	AgilentG3_CGH	CA\ScanData
05	252657310211	In queue 4	AgilentHD_CGH	CA\ScanData
06	251727810231	In queue 5	AgilentG3_CGH	CA\ScanData
07	252657310233	In queue 6	AgilentHD_CGH	CA\ScanData
08	251727810236	In queue 7	AgilentG3_CGH	CA\ScanData
09	251727810298	In queue 8	AgilentG3_CGH	CA\ScanData
10	251727810268	In queue 9	AgilentG3_CGH	CA\ScanData
11	252657310249	In queue 10	AgilentHD_CGH	CA\ScanData
12	251727810213	In queue 11	AgilentG3_CGH	CA\ScanData
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

**Figure 20** Scan Control program slot table

The slot table is a virtual representation of the contents of your scanner cassette. It is used to set up, start/stop, and monitor the progress of scans.

**Slot Status Indicator** Numbers to the left of the slot table are identical to the slot status indicator lights on the cassette. The color of the number changes to indicate the status of the slot and scan, as described in [Table 9](#) on page 92.

**Slide ID** The Slide ID used to name the scanned image file. After you load slides into the scanner cassette and close the scanner door, the program reads the barcode label for each slide in the cassette and displays it in this column. You can change the Slide

ID to any text acceptable in a file name. The barcode for the slide is retained, and is shown when you move the mouse over its Slide ID in the Scan Table.

**State** Displays the current state of the slot. Possible states and the color of the slot status indicator are shown in the following table.

**Table 9** Slot states and indicators

Slot status indicator	State	Meaning
Off	Empty	No slide is present in the cassette.
Blinks blue	Present	Slide is present in the cassette slot. When barcode is read successfully, it appears in Slide ID. Slide is not ready to add to a queue because it has no scan protocol assigned yet.
Blinks blue	Ready for queue	The slide is ready to add to a scan queue.
Solid blue	In queue x	Slide is in the scan queue, in position x, where x indicates the order in which the slides are scanned.
Blinks green	Scanning (x%)	Slide is in the process of scanning, where x% indicates the percent of completion for the scan.
Solid green	Complete	Scan finished successfully.
Yellow	Warning	A warning was generated during the scan.
Red	Error	An error occurred during the scan.

**Table 9** Slot states and indicators (continued)

Slot status indicator	State	Meaning
Blinks yellow	Removed	A slide that was "Ready" or "In Queue" was removed from the cassette.
Blinks yellow	Replaced	<p>A slide was placed into a slot whose state was "Removed."</p> <ul style="list-style-type: none"> <li>• If the barcode matches the original slide that was removed, the State is changed back to "Ready" or "In Queue."</li> <li>• If the barcode does not match the slide that was removed, the Status changes to "Ready" if a protocol is mapped to the slide Design ID. It changes to "Present" if no protocol is mapped to the slide Design ID.</li> </ul>

### Menu selections for State

For slides that are not scanning, commands are available that let you add or remove a slide from the queue. The selections available for a particular slide vary depending on the location of the slide in the queue, or if the slide is ready to add to the queue.

**Table 10** Menu selections for State

Selection	Description
Move to First	Moves the slide to the first position in the queue.
Move to Last	Moves the slide to the last position in the queue.
Move up	Moves the slide one place up in the scan queue.
Move down	Moves the slide one place down in the slide queue.

**Table 10** Menu selections for State (continued)

Selection	Description
Remove from queue	Removes the slide from the scan queue and sets the State to Ready for Queue.
Add to queue	Available if no slides are in the scan queue. Adds the selected slide to the scan queue.
Add to queue first	Adds slide to the first position in the queue. If a scan is already in process, the slide becomes the first slide to scan after completion of the current scan.
Add to queue last	Adds the slide to the last position in the queue.

**Scan Protocol** Displays the scan protocol to use for scanning the selected slide. Available scan protocols include the default Agilent-supplied scan protocols and any scan protocols that were created or imported. See “[About Scan Protocols](#)” on page 36.

**Output Folder** Displays the folder where image files created by the scanner are saved. By default, this location is D:\ScanData. You can change the default output folder in **Tools > Settings**. You can change the output folder for a slide before it is added to the queue. The Browse button lets you select a folder to store the data from each scan. Agilent recommends that the data be acquired to a local folder on a secondary hard drive. You can also select a network folder. If a network access problem is experienced during the scan, data is saved to a temporary local folder, and a warning is included in the scan log.

## Function buttons

Buttons next to the slot table are available depending on the instrument status.

<b>All to Queue</b>	Adds all slides not currently in the slide queue to the slide queue. Slides are added to the queue in the order they appear in the slot table.
<b>Empty Queue</b>	Removes all slides from the queue, except those currently scanning.
<b>Open Door/Close Door</b>	Opens or closes the door on the scanner.
<b>Start Scan/Stop Scan</b>	Starts or stops the scan. Slides are scanned in the order they appear in the scan queue.

## Settings pane

The screenshot displays the 'Settings pane' for Scan Control, organized into three main sections: Scan Settings, Image Settings, and File Naming Settings. Each section contains a list of settings with their current values and dropdown arrows for modification.

Scan Settings	
Dye Channel(s)	Red+Green
Scan Region	FullAgilentSlide
Resolution	3 um
Tiff Dynamic Range	16 bit
Red PMT Sensitivity (%)	100
Green PMT Sensitivity (%)	100
XDR Ratio	<NoXDR>

Image Settings	
Transform Image	None
Split	No
Compress	No

File Naming Settings	
Field 1	Instrument SN
Field 2	Slide ID
Field 3	Customize

Below the settings sections, there are two text input fields: 'Scan Description' and 'User'.

**Figure 21** Scan Control – settings pane

The settings pane lets you change individual settings for a selected slide. To change settings, the slide must not be in the scan queue. For more information on the settings available in this table, see “[Scan Protocol Editor dialog box](#)” on page 104.

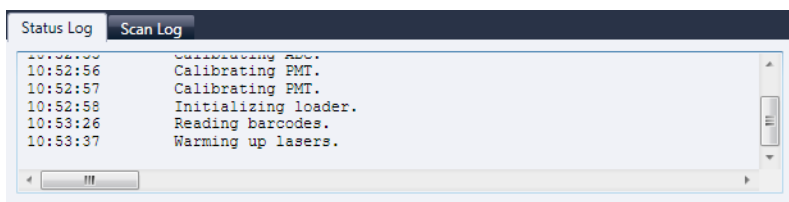


<b>Scan Settings</b>	Displays scan settings from the assigned scan protocol. To change a setting, click next to the setting name and select a new value from the list. For more information, see “ <a href="#">Scan Settings</a> ” on page 105.
<b>Image Settings</b>	Some data analysis programs have specific requirements for the images. This section lets you change how the image is created from the scan. For more information, see “ <a href="#">Image Settings</a> ” on page 107.
<b>File Naming Settings</b>	Shows selections for how the program names scan files. For more information, see “ <a href="#">File Naming Settings</a> ” on page 108.
<b>Scan Description</b>	In this area, you can type information about the microarray slide or scan.
<b>User</b>	In this area, you can type information about the operator who set up and performed the microarray scans.

## Log tabs

The software documents instrument and scan status in log files that are saved in the C:\ProgramData\Agilent\MicroArrayScanner\Logs folder. These logs are also displayed in the Log tabs at the bottom of the Scan Control program window.

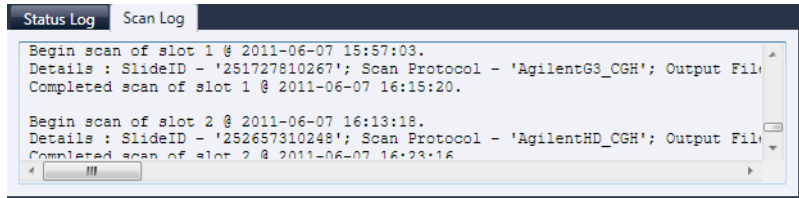
### Status Log tab



**Figure 22** Status Log tab

Displays information about the status of the instrument.

## Scan Log tab



**Figure 23** Scan Log tab

Displays information about the scans. When you start the Scan Control program, the Scan Log displays the scans from the previous 30 days.

Right-click in one of the log tabs to open a shortcut menu with the following options:

**Table 11** Shortcut menu options for log tabs

Menu command	Description
Clear	Clears the contents of the tab. The contents of the log file is not affected.
Copy	Active after you hold down the mouse button and drag to select a portion of the log. Copies the selected region to the Clipboard. You can paste the selection into a text editor or program of your choice.

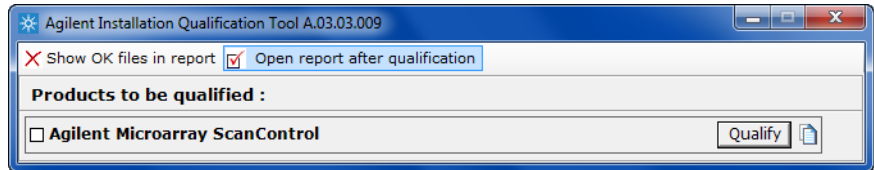
**Table 11** Shortcut menu options for log tabs

Menu command	Description
Select all	Selects all of contents of the log tab.
Auto Scroll	Turns auto scrolling within the log on or off. If autoscroll is on, when a new message appears, the program automatically scrolls to the bottom of the log so you can see it easily. If autoscroll is off, the pane does not scroll when new messages appear. Turning off autoscroll is useful if you want to review the log while the scanner is active.

## Scan Control Program Dialog Box Reference

This section contains descriptions of the parameters available in the dialog boxes that appear when you use the Scan Control program. The dialog box descriptions appear in alphabetical order.

### Agilent Installation Qualification Tool



**Figure 24** Installation Qualification Tool dialog box

**Purpose:** Verifies that the Scan Control program was installed correctly and generates an Installation Qualification report.

**To open:** In the Windows Start menu, click **All Programs > Agilent Technologies > Installation Qualification Tool**.

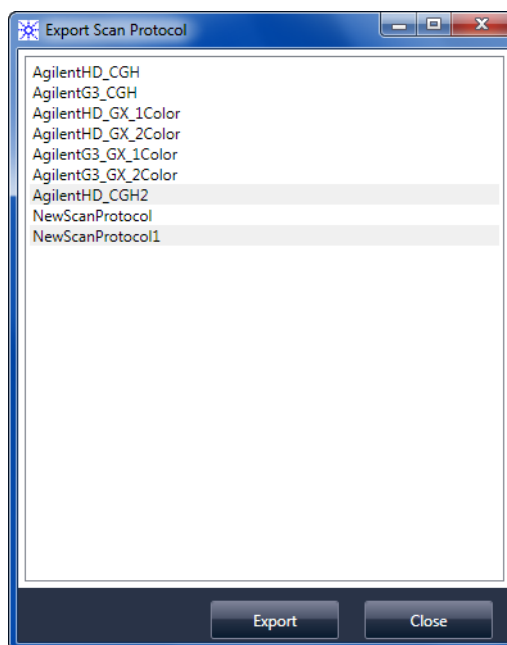
<b>Show OK files in report</b>	When selected, the qualification report includes a list of all files verified as OK. (Default is not selected. Invalid files are always shown.)
<b>Open report after qualification</b>	When selected, the qualification report opens in your web browser, after the installation qualification is finished.
<b>Products to be qualified</b>	Displays a list of Agilent software products that you can qualify with the tool.
<b>Qualify</b>	Starts the installation qualification for the selected product.
<b>Re-Qualify</b>	Appears after installation qualification. Lets you requalify the installation. Requalify after you correct any problems, to generate a new installation qualification report.

**Report saved at** Appears after installation qualification is finished. Displays a link to the location of the qualification report. Click the link to open the report in your web browser.



Opens the IQT reports folder.

## Export Scan Protocol dialog box



**Figure 25** Export Scan Protocol dialog box

**Purpose:** Lets you select available scan protocols to export.

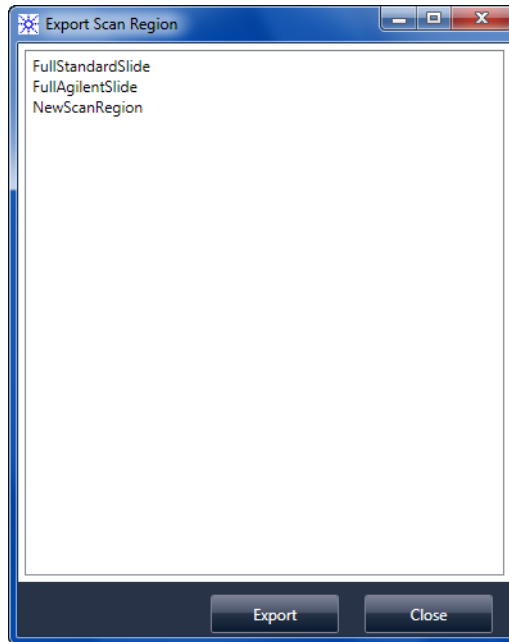
**To open:** In the Scan Protocol Editor dialog box, click **Export**.

## Export Scan Region dialog box

**Export** When one or more scan protocols are selected, this command opens the Save As dialog box, where you select a location and file name for the exported protocols file.

**Close** Closes the dialog box.

## Export Scan Region dialog box



**Figure 26** Export Scan Region dialog box

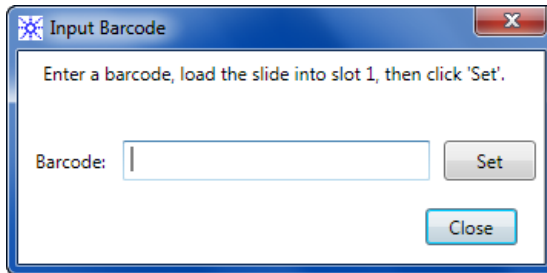
**Purpose:** Displays available scan regions that you can select to export.

**To open:** In the Scan Regions Editor dialog box, click **Export**.

**Export** When one or more scan regions are selected, this command opens the Save As dialog box, where you select a location and file name for the exported scan regions file.

**Close** Closes the dialog box.

## Input Barcode dialog box



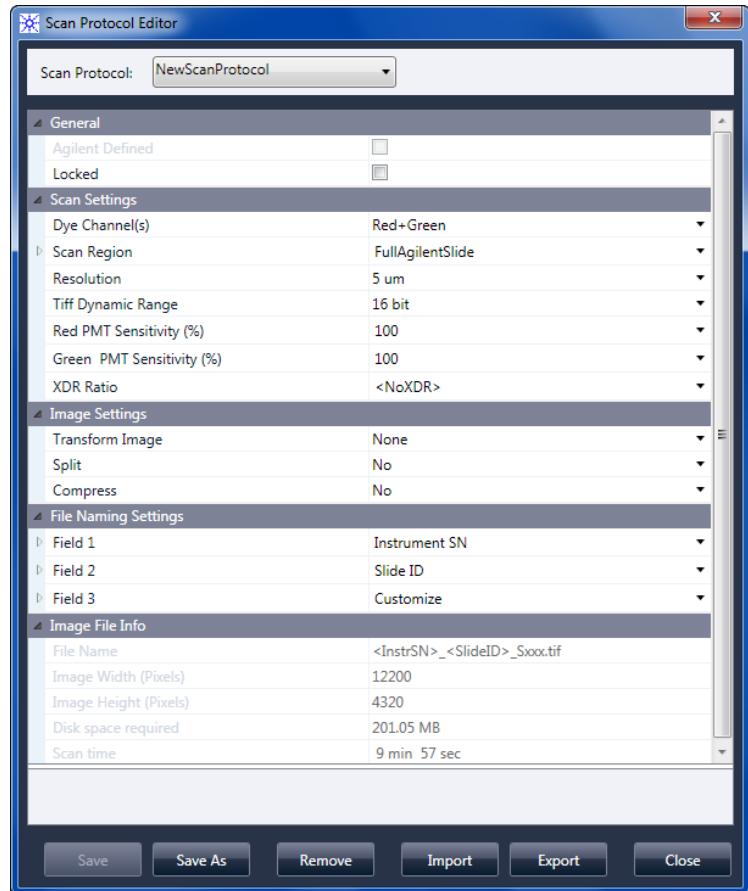
**Figure 27** Input Barcode dialog box

**Purpose:** Used to type or enter a barcode for a slide without a barcode or whose barcode is unreadable by the scanner.

**To Open:** In the Scan Control program, click **Tools > Input Barcode**.

- Barcode** The barcode you enter using an external barcode reader or your keyboard.
- Set** After the barcode is entered and the slide is loaded into slot 1 of the scanner, this button is used to assign the barcode to the slide in slot 1.
- Close** Used to close the dialog box.

## Scan Protocol Editor dialog box



**Figure 28** Scan Protocol Editor dialog box

**Purpose:** Used to create or change scan protocols.

**To open:** In the Scan Control program window, click **Tools > Scan Protocol Editor**.

**Scan Protocol** Displays a list of available scan protocols. The settings for the selected scan protocol are displayed in the Scan Protocol Editor dialog box.



### General

- Agilent Defined** A protocol provided by Agilent.
- Locked** When a protocol is locked, it cannot be changed.

### Scan Settings

**Dye channel** Determines whether only red (for example, Cy-5 dye), only green (for example, Cy-3 dye), or both dye channel information is gathered. The selection has no effect on the scan time, but selecting only one dye channel does reduce file size up to a factor of 2.

**Scan region** The *scan region* determines the area of the slide that is scanned. It must be large enough to capture the entire print region of the microarray. It must be small enough to avoid scanning too close to the barcode or other nontransparent border areas of the slide and affecting the ability of the scanner to auto focus properly. Minimizing the scan region also reduces scan time and save storage space.

Agilent provides a scan region suitable for all Agilent High Density and G3 slides, and another suitable for scanning full 25.4 mm × 76.2 mm slides without barcode labels.

**Resolution** Sets the scan resolution (pixel size) to 2, 3, 5 or 10 microns.

For 10-micron scans, each row of pixels in the TIFF image represents the average of two scan lines, one acquired in each direction. For 5-, 3- and 2-micron scans, you can select double-pass scanning to perform this averaging, or acquire only a single scan line for each image row.

A high-sensitivity scan mode is also available at all scan resolutions. The high-sensitivity mode provides sensitivity comparable to the double-pass mode but with scan times reduced by 25%. The high-sensitivity mode can be selected in the **Resolution** pull-down menu of the Scan Protocol Editor.

If you do not have a high-resolution license, 2- and 3- micron settings are not available.

**TIFF Dynamic Range** Sets the dynamic range to 16-bit or 20-bit. The G5761A scanner has extended the dynamic range of the PMT and signal processing electronics. When you select the 20-bit TIFF file option, you can access this extended range, enabling quantitation of high and low signal features in a single scan. If you do not have a high-resolution license, the 20-bit option is not available.

**NOTE**

If 20-bit option is selected, no XDR option is allowed; if an XDR option is selected already, it is reset automatically.

Table 12 shows the storage space and scan time for single and double pass scans for each resolution selected, for either a 16-bit TIFF dynamic range or a 20-bit range. The Scan Region is 61 X 21.6 mm.

The status bar at the bottom of the Scan Control main window shows an estimate of the storage space and run time required for the current queue of slides.

**Table 12** Storage space and scan time

Resolution	Storage Space, Mb, 16-bit	Storage Space, Mb, 20-bit	Scan Time, min.
2-micron single pass	1300	1600	24
3-micron single pass	620	760	16
5-micron single pass	200	300	10
10-micron single pass	52	115	10
2-micron double pass	1300	1600	46
3-micron double pass	620	760	31
5-micron double pass	200	300	19
2-micron high-sensitivity	1300	1600	36
3-micron high-sensitivity	620	760	24

**Table 12** Storage space and scan time (continued)

Resolution	Storage Space, Mb, 16-bit	Storage Space, Mb, 20-bit	Scan Time, min.
5-micron high-sensitivity	200	300	15
10-micron high-sensitivity	52	115	15

Double pass scans do not require more storage space than single pass scans, but they take twice as long to finish.

**Red PMT  
Sensitivity (%)  
and  
Green PMT  
Sensitivity (%)**

Sets the sensitivity level of the red channel and green channel PMTs. The PMT detects fluorescence emitted by the microarray.

The default output level (100%) sets the gain to the factory-calibrated level; this setting is recommended for Agilent microarrays. You can reduce each color channel setting independently to as low as 1%.

If a microarray is so bright that the upper end of the output signal is saturated, the PMT sensitivity level can be lowered to a sensitivity range that allows all the information to be read.

**XDR Ratio**

Before 20-bit TIFF file dynamic range was available, the eXtended Dynamic Range function was used to capture all the data scanned between very low signal features and very high signal features. Now, instead of using XDR, you can select the 20-bit TIFF file dynamic range to capture the wide dynamic range of data.

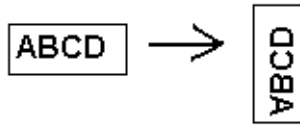
**NOTE**

If 20-bit option is selected, no XDR option is allowed.

**Image Settings**

**Transform  
Image**

Some analysis programs require data from one-color images rotated 90 degrees. If you select **Flip/Rotate**, the image is transformed as shown in [Figure 29](#).



**Figure 29** Image with **Flip/Rotate** option set

**Split** When you select **Yes**, the color file is split into two color files. The split files now have the names of *FileName\_green* and *FileName\_red*, where *FileName* is the name that was automatically assigned to the file before it was split.

This option is available only for 16-bit TIFF dynamic range scans.

**NOTE**

If a single dye channel, 20-bit scan, or any XDR option is selected, no Split option is allowed; if the Split option is selected already, it is reset automatically.

**Compress** When you select **Yes**, the program reduces the final amount of storage space occupied by scan images by compressing the TIFF files. The compression algorithm used, LZW, reduces the storage space by 20 to 70 percent.

**File Naming Settings**

**Field 1, Field 2, and Field 3** Displays the settings used for naming TIFF image files created by the scanner. Choices are shown in [Table 13](#).

**Table 13** Choices for file naming fields

Choice	Description
<none>	The field is not included in the image file name.
Instrument SN	Includes the serial number of the scanner in the image file name.

**Table 13** Choices for file naming fields (continued)

Choice	Description
Slide ID	Includes the slide identification number (barcode) in the image file name.
Scan DateTime	Includes the date and time of the scan in the image file name.
Customize	Lets you type custom information to include in the image file name. After you select <b>Customize</b> , double-click <b>Field X</b> . (Where X = the field number 1, 2, or 3.) In the adjacent box, type the custom information to include in the file name.

Scan files are named using the following rules.

For *standard scans*, the Scan Control program uses up to three user-defined name prefixes to compose the file name. These prefixes are defined in the scan protocol.

**Field1\_Field2\_Field3\_ScanNumber.tif**

For *XDR scans*, an additional segment (either *\_H* or *\_L*) is added to the file name to distinguish the XDR Hi image from the XDR Lo image:

**Field1\_Field2\_Field3\_ScanNumber\_H.tif**

**Field1\_Field2\_Field3\_ScanNumber\_L.tif**

The Scan Control program automatically assigns the *Scan Number*.

The program compares the file name of a new scan with file names in the selected data folder.

If Field1\_Field2\_Field3 is unique, the scan number is set to S01.

If a match is found, the scan number is increased until the file name is unique.

## 6 Reference

### Scan Protocol Editor dialog box

#### Example

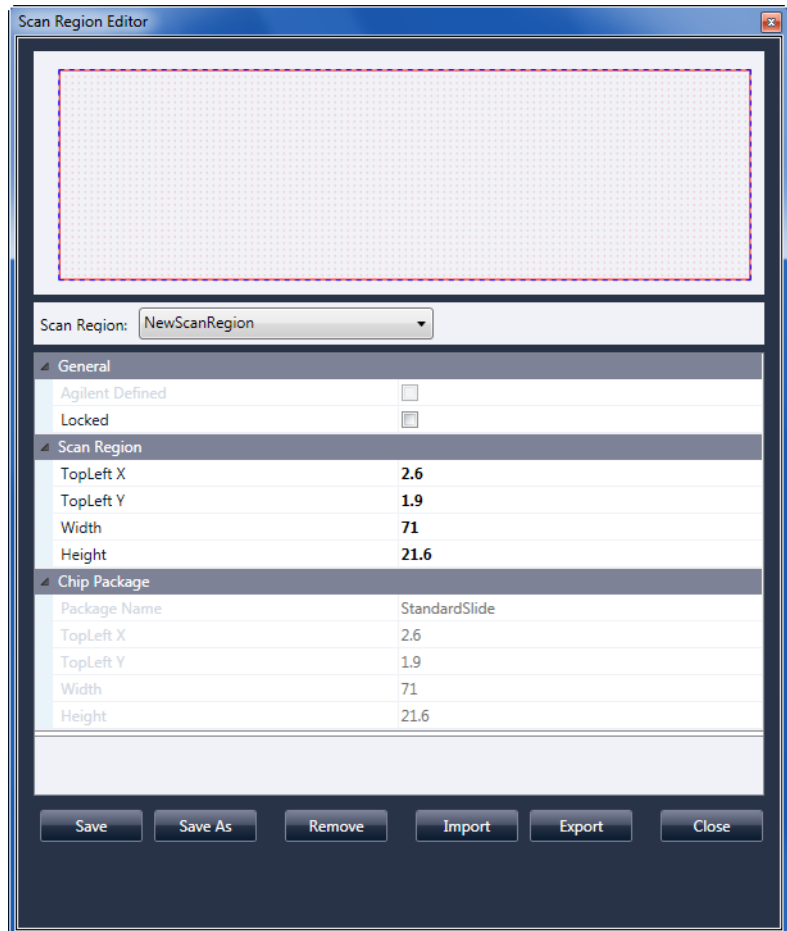
US4510PP02\_251485023883\_S03.tif

- Instrument Serial # = US4510PP02
- Slide ID = 251485023883
- ScanNumber = S03. Indicates the third scan file in the folder with the same Instrument Serial # and Slide ID.

#### Image File Info

This section is a read-only area that displays information about the image file name, geometry of the slide, disk space required for the file, and estimated time to finish the scan.

## Scan Region Editor dialog box



**Figure 30** Scan Region Editor dialog box

**Purpose:** Lets you adjust or define the area of the slide that is scanned.

**To open:** In the Scan Control program menu bar, click **Tools > Scan Region Editor**.

### General

- Agilent Defined** A protocol provided by Agilent.
- Locked** When a protocol is locked, it cannot be changed.

### Scan Region

- TopLeft X** X-axis measurement for the upper left corner. Type this measurement and that of the Y-axis in mm to position the region on the slide.
- TopLeft Y** Y-axis measurement for the upper left corner.
- Width** Width of the scan region measured from the end of the x-axis measurement in the upper left corner.
- Height** Height of the scan region measured from the end of the Y-axis measurement in the upper left corner.

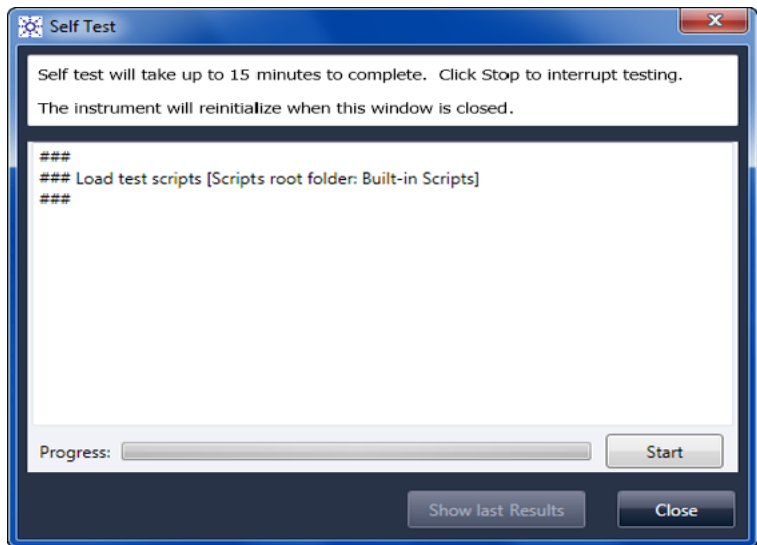
### Chip Package

A chip package describes the maximum size of the scan region for slides of a designated type. This read-only area displays the default scan region for the selected chip package. There are two types of chip packages; Full Agilent for Agilent slides with barcode labels, and Full Standard for slides without barcode labels.

- Save** Saves the current scan region values in the current slide scan region.
- Save As** Opens the Save As New Name dialog box, where you can save the current scan region with a new name.
- Remove** Removes the selected scan region.
- Import** Opens the Open dialog box, where you select an exported scan region file to import to the program.
- Export** Opens the Export Scan Region dialog box, where you select one or more scan regions to export.
- Close** Closes the dialog box.



## Self Test dialog box



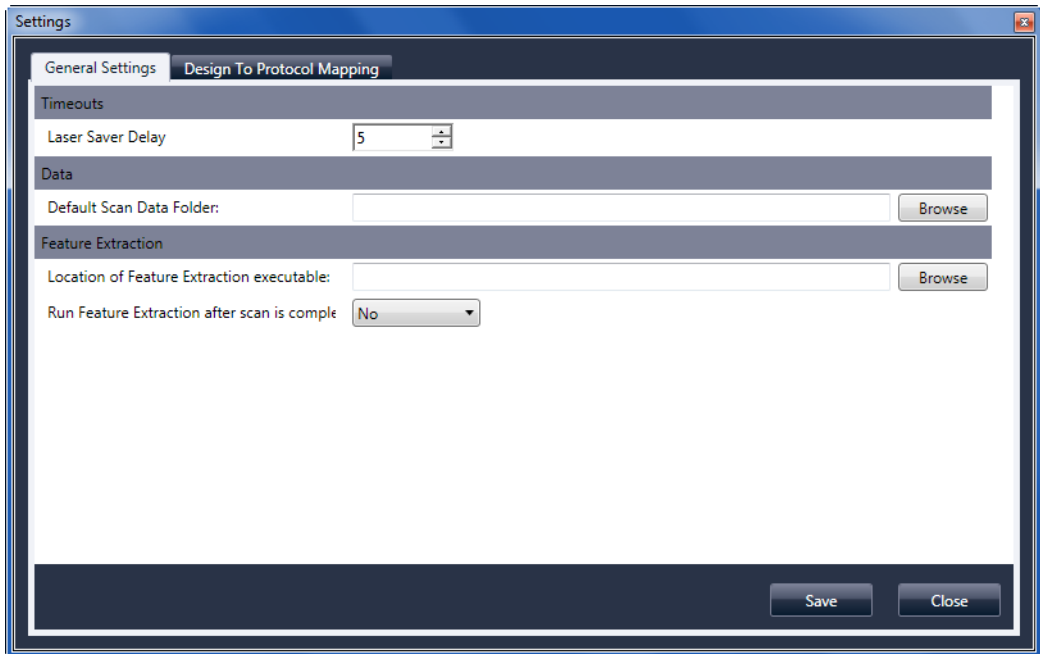
**Figure 31** Self Test dialog box

**Purpose:** Examines various scanner subsystems to check for out-of-specification behavior. After the self test is finished, a summary of the results is opened in your internet browser. The test results are also saved in the C:\ProgramData\Agilent\MicroArrayScanner\SelfTestReport folder.

**To open:**

- Start/Stop** Starts or stops the self-test.
- Show Last Results** If more than one self test was run without closing this dialog box, this command opens your internet browser with the results.
- Close** Closes the Self Test dialog box and reinitializes the scanner.

## Settings dialog box – General Settings



**Figure 32** Settings dialog box – General Settings tab

**Browse** For settings that require a folder location, lets you browse to the folder and select it, rather than typing the path.

**Save** Saves the settings. If you change settings and want to save them, select this button before you close the dialog box.

**Close** Closes the dialog box without saving changes.

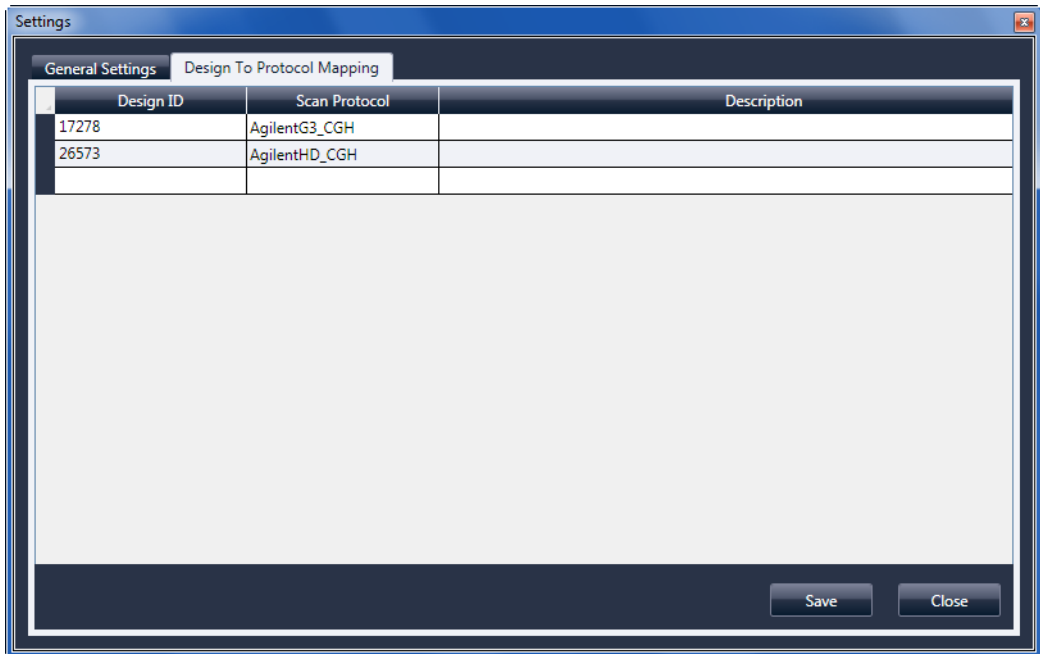
### Timeouts

**Laser Saver Delay** When no scan or scan queue is running, the lasers automatically turn off after this amount of time (in minutes).

**Data**

**Default Scan Data Folder** Displays the folder where images created by the scanner are stored by default. You can change this folder for a scan in the Scan Table.

## Settings dialog box – Design To Protocol Mapping



**Figure 33** Settings dialog box - Design To Protocol Mapping tab

**Purpose:** Used to assign default scan protocols to microarray slide Design IDs. Whenever the scanner recognizes a slide that has a scan protocol mapped to its design, the program automatically fills in the mapped scan protocol in the Slot Table.

**To open:** In the Scan Control program menu bar, click **Tools > Settings** and then click **Design To Protocol Mapping**.

**Design ID** For Agilent microarray slides, you can determine the Design ID from the barcode. All barcodes start with 25; the next five digits represent the Design ID. For example, the Design ID for barcode 251727810298 is 17278.

## Settings dialog box – Design To Protocol Mapping

<b>Scan Protocol</b>	The scan protocol that is assigned to the Design ID. This scan protocol is automatically assigned in the Slot Table whenever the scanner recognizes a slide with the associated Design ID.
<b>Description</b>	An area where you can type information about the mapped scan protocol.

## About Adding Slides

You can add slides to the SureScan Dx Microarray Scanner even when it is scanning. Use the following guidelines when adding slides to the scanner.

- You can add slides (in slide holders) to the cassette even when scanning is in process. If a slide is actively loading or unloading, you cannot open the door. Wait approximately 30 seconds for the loading or unloading process to finish.
- When the door is open, the scanner waits to eject a slide that is currently scanning.
- If the door is left open with no activity for 5 minutes, a message appears to warn you that the door is about to close, and then the door closes automatically.
- If you place a slide into the slot for a slide that is currently scanning, the slot status indicator turns red, and a message appears instructing you to remove the slide.
- If the door jams while closing (due to an incorrectly inserted slide holder, for example) a dialog is displayed that asks you to clear the jam and then click OK to try again.



## SureScan Dx Scanner Specifications

The SureScan Dx Microarray Scanner operates within the following specifications:

<b>Approximate dimensions</b>	Height: 42 cm (16.5 in) Width: 43 cm (17 in) Depth: 67 cm (26 in)
<b>Weight</b>	56.8 kg (125 lbs)
<b>Power input</b>	100 – 240 Vac, 50 – 60 Hz, 250-VA max.
<b>Fuses</b>	Two power supply fuses: T4A, 250 VAC (part# 2110-1491)
<b>Temperature range</b>	Operating: 15 ° to 30 °C Storage: -40 ° to +50 °C
<b>Humidity</b>	Operating: 15% to 85% RH at 30 °C  Potentially sensitive to condensing humidity conditions. Follow precautions stated in <a href="#">“Tips to avoid damage to the scanner”</a> on page 65. Always allow 12 hours thermal equilibration time on site before opening the shipping box.
<b>Altitude</b>	Operating maximum: 4,600 m (15,000 ft) Storage maximum: 9,200 m (30,000 ft) at -40 °C
<b>Usage</b>	Indoor use
<b>Laser information</b>	Wavelengths: <ul style="list-style-type: none"> <li>• Green solid-state laser: 532 nm</li> <li>• Red solid-state laser: 640 nm</li> </ul> Power: both controlled to 13 mW
<b>Maximum scan region</b>	71 mm × 21.6 mm
<b>Suggested microarray print region</b>	1 mm smaller than scan region on the right, 2 mm on the left, and 0.6 mm on the top and bottom.

## 6 Reference

### Settings dialog box – Design To Protocol Mapping

<b>Dyes supported</b>	Cyanine-3 (Cy-3) and cyanine-5 (Cy-5) and dyes similar to Cy-3 and Cy-5 and Alexa 647, 555, and 660 dyes
<b>Resolution (pixel size)</b>	2, 3, 5 or 10 microns
<b>Pixel placement error</b>	< 1 pixel at 5-micron resolution
<b>Uniformity</b>	Average Global non-uniformity: $\leq 5\%$ using $100 \mu\text{m}^2$ features Average Local non-uniformity: $\leq 2\%$ using $100 \mu\text{m}^2$ features*

#### Scan time

**Table 14** Scan Time for Single and Double Pass Scans for Agilent HD Scan Region  $61 \times 21.6 \text{ mm}$

<b>Resolution</b>	<b>Scan Time, min.</b>
2-micron single pass	24
3-micron single pass	16
5-micron single pass	10
10-micron single pass	10
2-micron double pass	46
3-micron double pass	31
5-micron double pass	19
2-micron high-sensitivity	36
3-micron high-sensitivity	24
5-micron high-sensitivity	15
10-micron high-sensitivity	15

<b>Dynamic range</b>	Single scan 16-bit dynamic range $>10^4$ Single scan 20-bit dynamic range $>10^5$ Dual scan extended dynamic range (XDR) $>10^6$
----------------------	--

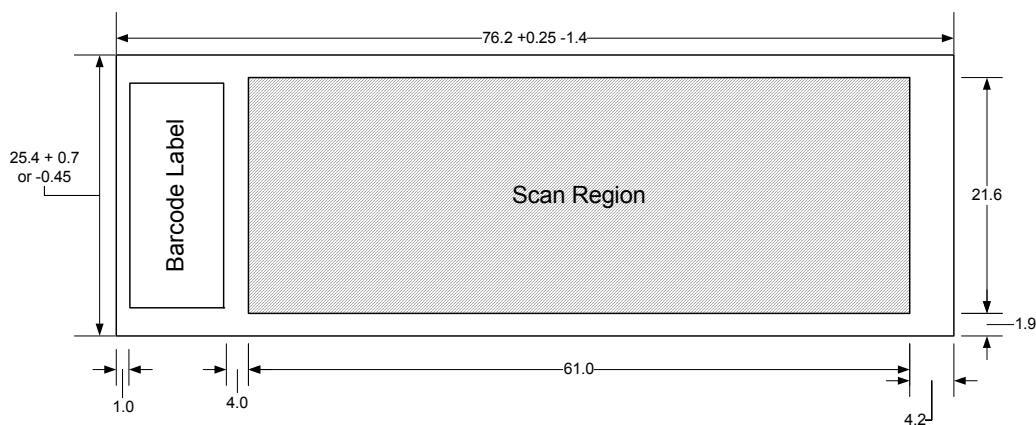
\* Typical average Local non-uniformity is  $\leq 1\%$  using  $100 \mu\text{m}^2$  features.



## Slide Specifications

### Scan dimensions

The scan region for a standard Agilent microarray is specified in [Figure 34](#). All dimensions are in millimeters and the reference point is the lower right side of the glass.



**Figure 34** Default scan region for G5761A scanner

### Glass specifications

The SureScan Dx Microarray Scanner uses slide holders to move the microarrays in and out of the cassette. These slide holders are designed to accept a 25.4 mm × 76.2 mm nominal piece of glass.

The detailed specifications of the glass are as follows:

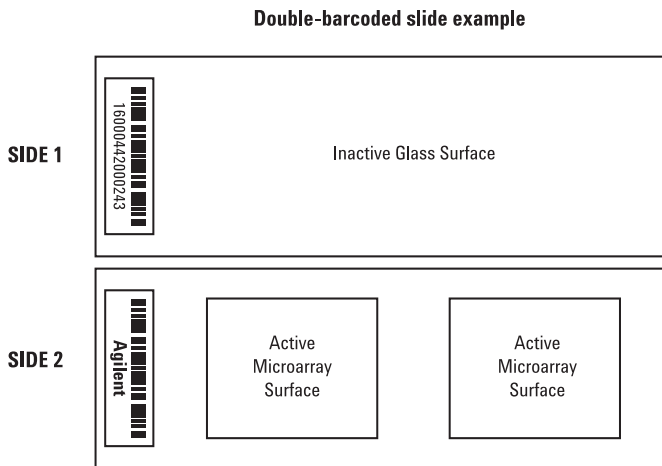
- 25.4 mm (−0.45 mm, or +0.7 mm)
- 76.2 mm (+0.25 mm, or −1.4 mm)
- 1 mm thick (+/-0.1 mm)
- No mirrored slides
- High quality with low intrinsic fluorescence
- Index of refraction from 1.510 to 1.515

## Barcode and barcode label specifications

### Barcode specifications for Agilent slides

The G5761A scanner reads barcodes placed on the active side of the slide.

For backwards compatibility with the G2565AA model scanners, Agilent microarrays continue to have barcodes on both sides. The label with the text “Agilent” denotes the active side; the label with the numeric value is the inactive side.



**Figure 35** Agilent slide barcode orientation vs. microarray surface

## Regulatory Information

This section lists regulatory information for the SureScan Dx system, which includes the G5761A SureScan Dx microarray scanner, computer workstation, and control software.

### Acoustic noise information

Manufacturer's Declaration:

- |                |   |
|----------------|---|
| <b>English</b> | This statement is provided to comply with the requirements of the German Sound Emission Directive, from 18 January 1991. Sound Pressure $L_p < 70$ dB(A), at operator's position, normal operation, according to EN 27779/ISO 7779 (Type Test).           |
| <b>Deutsch</b> | Die folgende Information wird in Übereinstimmung mit den Anforderungen der Maschinenlärminformationsverordnung vom 18. Januar 1991 erteilt. Schalldruckpegel am Arbeitsplatz bei normalem Betrieb, $L_p < 70$ dB(A), nach EN 27779/ISO 7779 (Typprüfung). |

### Recycling and disposal

*Contact Agilent Technologies for more information on recycling and disposal.*

This device is designed to accommodate recycling at the end of its useful life. Please dispose of this device in accordance with local regulations.

### Electromagnetic interference

The scanner is intended for use with shielded cables only.

- |                  |   |
|------------------|---|
| <b>Emissions</b> | Complies with the emissions limits for Class A, Group 1 equipment specified in CISPR 11/EN5011 as required in IEC 61326-1 for Class A equipment. This equipment is not intended for use in residential areas.   |
| <b>Immunity</b>  | This device complies with the immunity levels required in IEC 61326-2-6 for a non-controlled, electromagnetic environment. This equipment is not intended for use in residential or industrial environment. See accompanying Declaration of Conformity for specific levels. |

**Canada** This ISM (Industrial-Scientific-Medical) device complies with Canadian ICES-001.

Cet appareil ISM est conforme a la norme NMB-001 du Canada.

### Safety information

#### CAUTION

If the SureScan Dx system is used in a manner not specified by Agilent, the protection provided by the equipment may be impaired.

This scanner complies with the following safety standards:

CAN/CSA-. C22.2 No. 61010-1 - 04	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL Std No. 61010-1 (2nd Edition)	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use: Part 1: General Requirements
IEC 61010-1:2001	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
IEC 61010-2-101:2002	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 2-101: Particular Requirements for In Vitro Diagnostic (IVD) Medical Equipment
EN 61010-1:2001	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements
EN 61010-2-101:2002	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 2-101: Particular Requirements for In Vitro Diagnostic (IVD) Medical Equipment
IEC 60825-1:2007	Safety of laser products Part 1: Equipment classification and requirements
EN60825-1:2007	Safety of Laser Product – Part 1: Equipment Classification and Requirements

- Pollution Degree: 2
- Installation Category: II
- Class I Equipment; requires a grounding system
- Class 1 Laser Product
- CSA and NRTL Certified Product



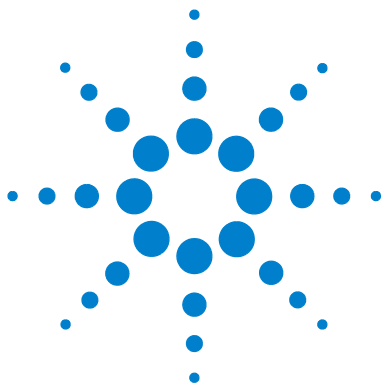
### **Validation Data and Conditions of Intended Use**

The SureScan Dx Microarray Scanner has been validated as a CE In Vitro Diagnostic medical device under Directive 98/79/EC (Annex III).

Performance of the device is dependent upon operation by trained laboratory professionals working in a clinical laboratory environment.

The SureScan Dx Microarray Scanner is intended for use with validated diagnostic assays provided by the end user. Refer to the Instructions for Use for the validated diagnostic assay to determine performance limitations of the assay for clinical purposes.

**6 Reference**  
Barcode and barcode label specifications



## 7 Basic Instructions for Use

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This chapter provides the minimal Instructions For Use in multiple languages.



## English instructions

### Safety symbols on scanner



#### **PINCH POINT HAZARD symbol**

This symbol is placed on the product where there is potential to pinch hands or fingers. Keep hands clear of movable parts in this area.

### Safety guidelines

The SureScan Dx scanner is designed for safety and ease of use. Be sure that you understand and observe all the warnings and cautions before operating the SureScan Dx scanner.



#### **WARNING**

**Do not attempt to repair or gain access to SureScan Dx scanner internal components. You risk exposure to high voltage and harmful laser radiation. Removing the main cover voids the warranty.**

---



#### **WARNING**

**Connect the SureScan Dx scanner to a grounded power outlet. It relies on a protective earth ground for safety.**

---



#### **CAUTION**

In order to minimize vibration due to the rapid scanning of the laser excitation across the microarray, install the scanner on a sturdy lab bench or table. Do not install the scanner in proximity to other lab equipment that might cause vibration.

---



#### **CAUTION**

The SureScan Dx scanner is sensitive to condensing humidity conditions. Follow precautions stated in product documentation. See [“Humidity conditions”](#) on page 129.

---



## Humidity conditions

The SureScan Dx scanner is sensitive to condensing humidity conditions. Always allow 12 hours thermal equilibration time on site before opening the shipping box.

To ensure optimal performance, operate the SureScan Dx scanner only in the following humidity range.

Operating: 15% to 85% RH at 30 °C

## Operating instructions

### Step 1. Turn on the SureScan Dx Microarray Scanner and start the Scan Control program

- 1 Turn on the SureScan Dx scanner using the power switch on the front of the instrument.
- 2 Turn on the computer workstation and wait for it to boot up.
- 3 Double-click the **Agilent Microarray Scan Control** icon to start the Scan Control program.



**Figure 36** Agilent Microarray Scan Control icon

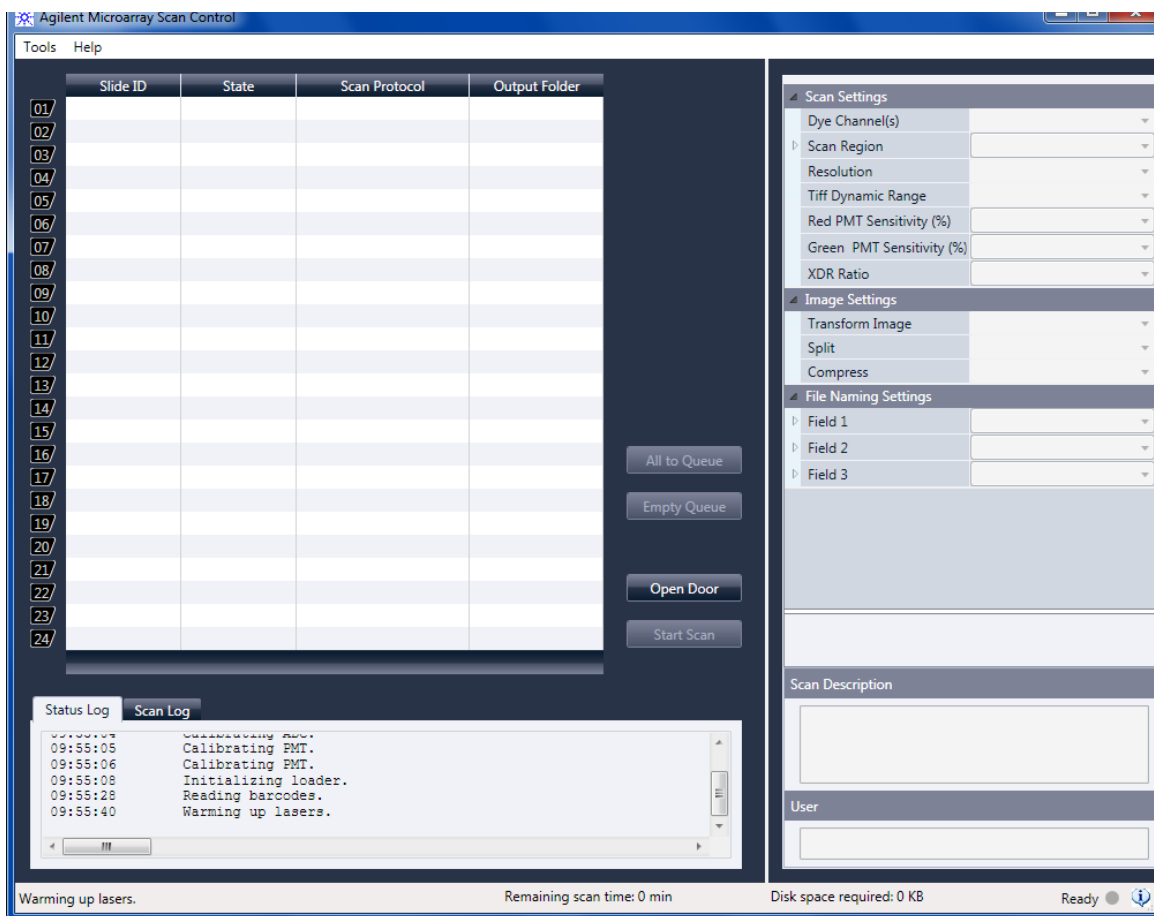
When the program starts, the Agilent Microarray Scan Control program main window opens and the scanner performs its initialization sequence. After the initialization sequence finishes, the Open Door button is enabled and you can load slides. See [Figure 37](#) on page 130.

### NOTE

If the scanner has 24 slides loaded when you turn it on, the initialization will fail because it cannot perform the slide eject cycle.

## 7 Basic Instructions for Use

### Operating instructions



**Figure 37** Agilent Microarray Scan Control program window – ready to add slides.

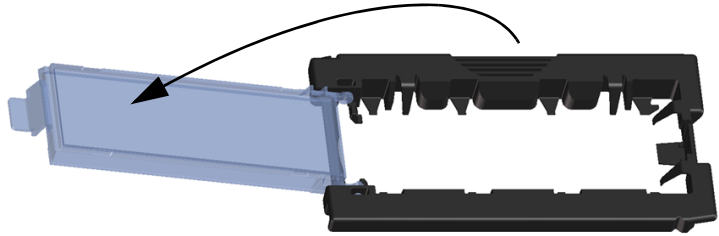
The status of the scanner is indicated at the lower right corner of the Scan Control window, in the status bar.

### Step 2. Insert slides into slide holders

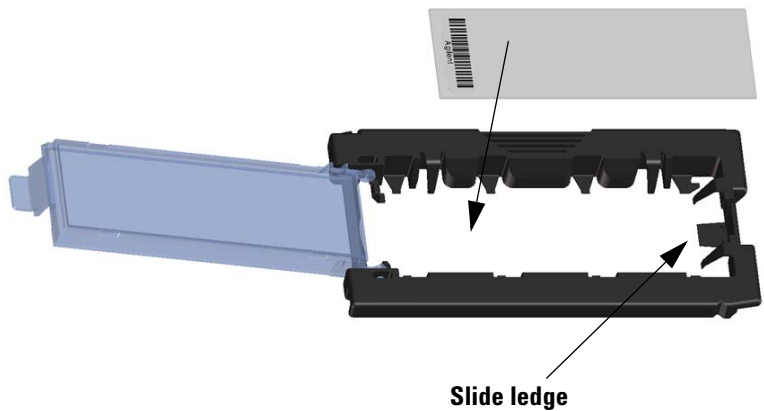
*Fingerprints cause errors in the fluorescence detection. Touch only the edges of the slide and always use gloves when handling slides.*

- 1 Before you insert the slide, place the slide holder on a flat surface, with the clear cover facing up, and the tab on the right. This helps to ensure that you have the slide aligned properly when you insert it into the slide holder.

- 2 Gently push in and pull up on the tabbed end of the clear plastic cover to open it.



**Figure 38** Opening the slide holder



**Figure 39** Inserting slide into the slide holder

- 3 Insert the slide into the holder, as follows:
  - a Hold the slide at the barcode end.
  - b Make sure that the active microarray surface faces up, toward the slide cover, with the barcode on the left.
  - c Carefully place the end of the slide without the barcode label onto the slide ledge. See [Figure 39](#).
  - d Gently lower the slide into the slide holder. See [Figure 40](#).
  - e Close the plastic slide cover, pushing on the tab end until you hear it “click”. This moves the slide into position in the holder.
  - f Gently push in and pull up on the tabbed end of the clear plastic cover to open it again and verify that the slide is correctly positioned.

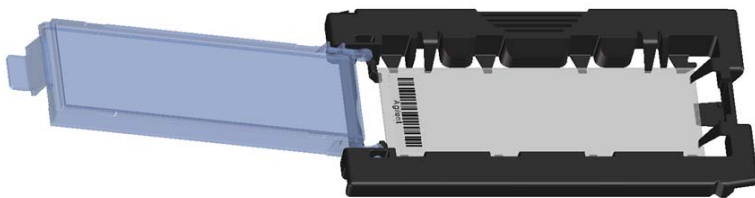
Once inserted, the slide lies flat and matches up with the alignment points on the slide holder.

  - g Close the plastic slide cover, pushing on the tab end until you hear it “click”. See [Figure 41](#).

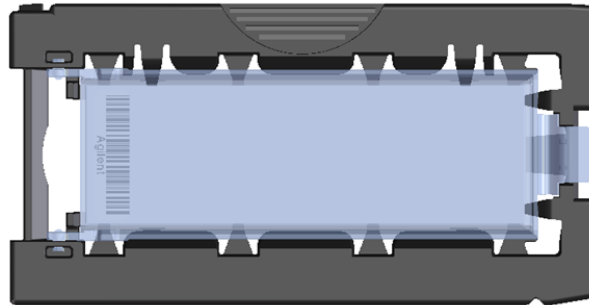


**CAUTION**

If the tab on the plastic slide cover is over-stretched, it may not properly “click” into place. Dispose of slide holders that no longer click when you close them.



**Figure 40** Slide inserted in slide holder



**Figure 41** Slide holder – closed with slide

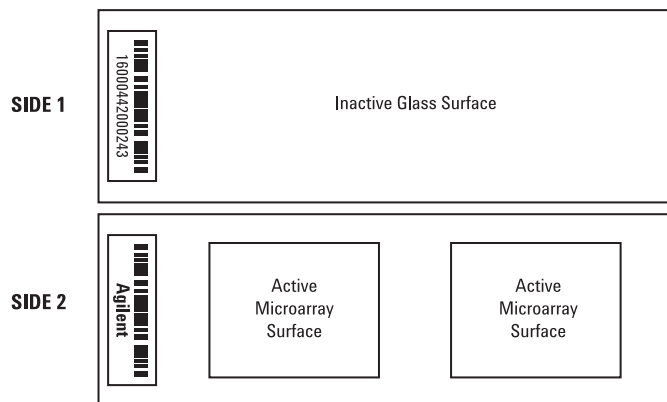
Agilent slides have two barcodes, one on each side of the glass. See [Figure 42](#). Place the active microarray side of the slide facing toward the slide holder cover.



**CAUTION**

An improperly inserted slide can damage the SureScan Dx scanner.

**Double-barcoded slide example**



**Figure 42** Slide orientation

### Step 3. Load the slide holders into the cassette

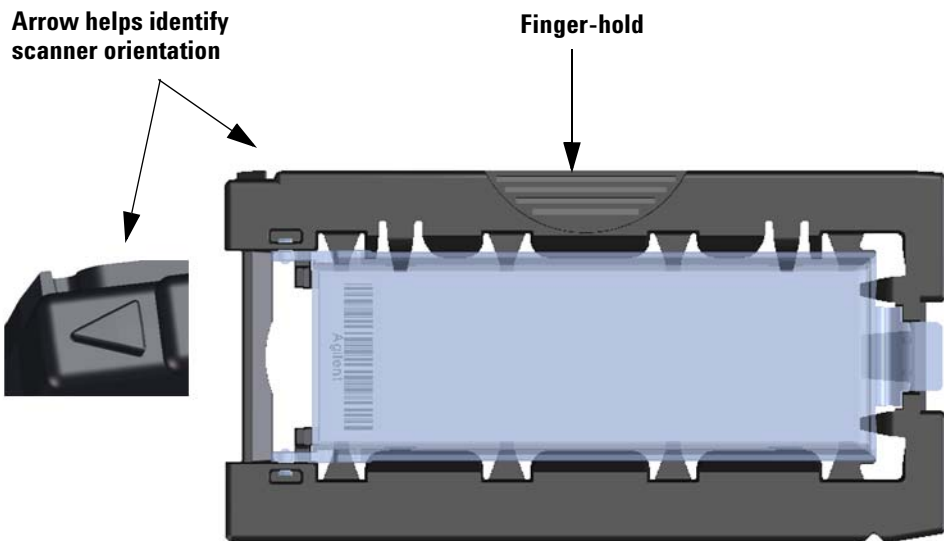
- 1 In the Scan Control program window, click **Open Door** to open the scanner door.



#### CAUTION

The correct way to open the scanner door is using the Open Door button in the Scan Control program. Do not attempt to open the door manually.

- 2 Pick up the slide holder using the finger hold. The arrow on top of the slide holder points to the left when you pick up the slide holder correctly. See [Figure 43](#).



**Figure 43** Slide holder helps you to insert slides correctly

Insert a slide holder into any open slot. The slot numbers are clearly labeled on the slide cassette. Do not force the slide holder into the cassette; it inserts easily if properly aligned with the finger-hold on top and the arrow facing to the left.



**Figure 44** Inserting slide holder into cassette

- 3** Make sure that the slide holder is seated in the bottom of the cassette slot.

The slot number for the loaded slide blinks blue.

- 4** Repeat steps 2 through 3 until all slide holders are loaded in the cassette.



**CAUTION**

Improper placement of the slide holder in the cassette can result in severe damage to the SureScan Dx Microarray Scanner.

- 5** In the Scan Control program, click **Close Door**.

For slides that do not have a scan protocol mapped to their design, the scan protocol remains empty and the slot State remains “Present”. Assign a scan protocol, as described in “[Step 4. Set or change protocol scan settings](#)”.

*The current scan protocol settings are displayed for each selected slide in the right pane of the Scan Control software main window.*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-color gene expression microarrays
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-color gene expression microarrays
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-color gene expression microarrays
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-color gene expression microarrays
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP microarrays
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP microarrays
<b>AgilentHD_miRNA</b>	Agilent HD miRNA microarrays
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA microarrays

#### Step 4. Set or change protocol scan settings

The first time you set up to scan a slide, select a scan protocol to use.

- For each slide in the slot table, click the Scan Protocol and select a scan protocol to use for scanning the slide.

Agilent supplies eight preloaded protocols for your selection and use with Agilent high density (HD) microarrays and Agilent G3 microarrays.

#### Step 5. (Optional) Change the output folder

You can change the specified output folder where the program saves the image files created by the scanner.

- For each slide the slot table, click the Output Folder and browse to the location of the desired folder.

Agilent recommends selecting a local folder on a secondary hard drive.

#### Step 6. Add slides to the scan queue

- 1 In the Scan Control main window, click **All to Queue** to add all slides in the slot table with a State of “Ready for queue” to the scan queue.

A confirmation dialog box appears. Click **Yes** to add the slides to the queue.

OR



In the Scan Control slot table, click the **State** cell for the first slide to scan and click **Add to Queue**.

- 2 For each additional slide you want to scan,
  - Click the **State** cell and select **Add to queue first** to add the slide to the top of the scan queue.

OR

- Click the **State** cell and select **Add to queue last** to add the slide to the bottom of the scan queue.

If you need to remove all slides from the queue, click **Empty Queue** in the Scan Control main window.

### Step 7. Scan your slides

- 1 If necessary, in the Scan Control main window, click **Close Door**.

Wait until the door closes and the **Start Scan** button is enabled.

- 2 In the Scan Control main window, click **Start Scan** to begin scanning the slides that were added to the queue.

### Step 8. Remove the slides

- 1 In the Scan Control main window, click **Open Door** to open the scanner door.
- 2 Open the scanner door and remove the slide holders from the cassette.
- 3 Remove the slides from the slide holders, as follows:
  - a Hold the slide holder on the sides with the Agilent logo facing up.
  - b Gently push in and pull up on the tabbed end of the clear plastic cover to open it.
  - c Push up on the barcode end of the slide from underneath the slide holder to avoid fingerprints on the sample area.
  - d Grasp the slide from the sides and remove from the slide holder.

## Инструкции на български

### Символи за безопасност на скенера



#### Символ за ОПАСНОСТ ОТ ПРЕЩИПВАНЕ

Този символ е поставен върху продукта на местата, където има потенциална опасност да прещипете ръцете или ръстите си. Дръжте ръцете си далеч от подвижните части в тази област.

### Насоки за безопасност

СкENERЪТ SureScan Dx е конструиран за безопасна и лесна употреба. Уверете се, че разбирате и съблюдавате всички редупреждения, преди да използвате скенера SureScan Dx.



#### ПРЕДУПРЕЖДЕНИЕ

Не опитвайте да поправяте или да осъществявате контакт с вътрешните компоненти на скенера SureScan Dx. Рискувате да се изложите на високо напрежение или на опасно лазерно лъчение. Свалянето на основния капак анулира гаранцията.



#### ПРЕДУПРЕЖДЕНИЕ

Свържете скенера SureScan Dx към заземен ел. контакт. Той разчита на защитно заземяване за безопасност.



#### ВНИМАНИЕ

За да намалите вибрациите от бързото сканиране на лазерното възбуждане в микроматрицата, монтирайте скенера върху стабилна лабораторна поставка или маса. Не монтирайте скенера в близост до друго лабораторно оборудване, което може да причини вибрации.



#### ВНИМАНИЕ

СкENERЪТ SureScan Dx е чувствителен към условия на кондензиране на влага. Следвайте предпазните мерки, посочени в документацията на продукта. Вж. “Условия на влага” на страница 139.

## Условия на влага

Скенера SureScan Dx е чувствителен към условия на кондензиране на влага. Винаги оставяйте 12 часа за установяване на термално равновесие в помещението, преди да отворите кутията с доставката.

За да гарантирате оптимална производителност, работете със скенера SureScan Dx само в обхвата на влажност, посоеен по-долу.

При работа: 15% до 85% RH при 30 °C

## Инструкции за работа

### Стъпка 1. Включете SureScan Dx Microarray Scanner и стартирайте програмата Scan Control (Контрол на сканиране)

- 1 Включете скенера SureScan Dx чрез ключа на захранването в предната част на уреда.
- 2 Включете компютърната работна станция и я изчакайте да зареди.
- 3 Щракнете двукратно върху иконата **Agilent Microarray Scan Control**, за да стартирате програмата Scan Control (Контрол на сканиране).



**Фигура 36** Икона Agilent Microarray Scan Control

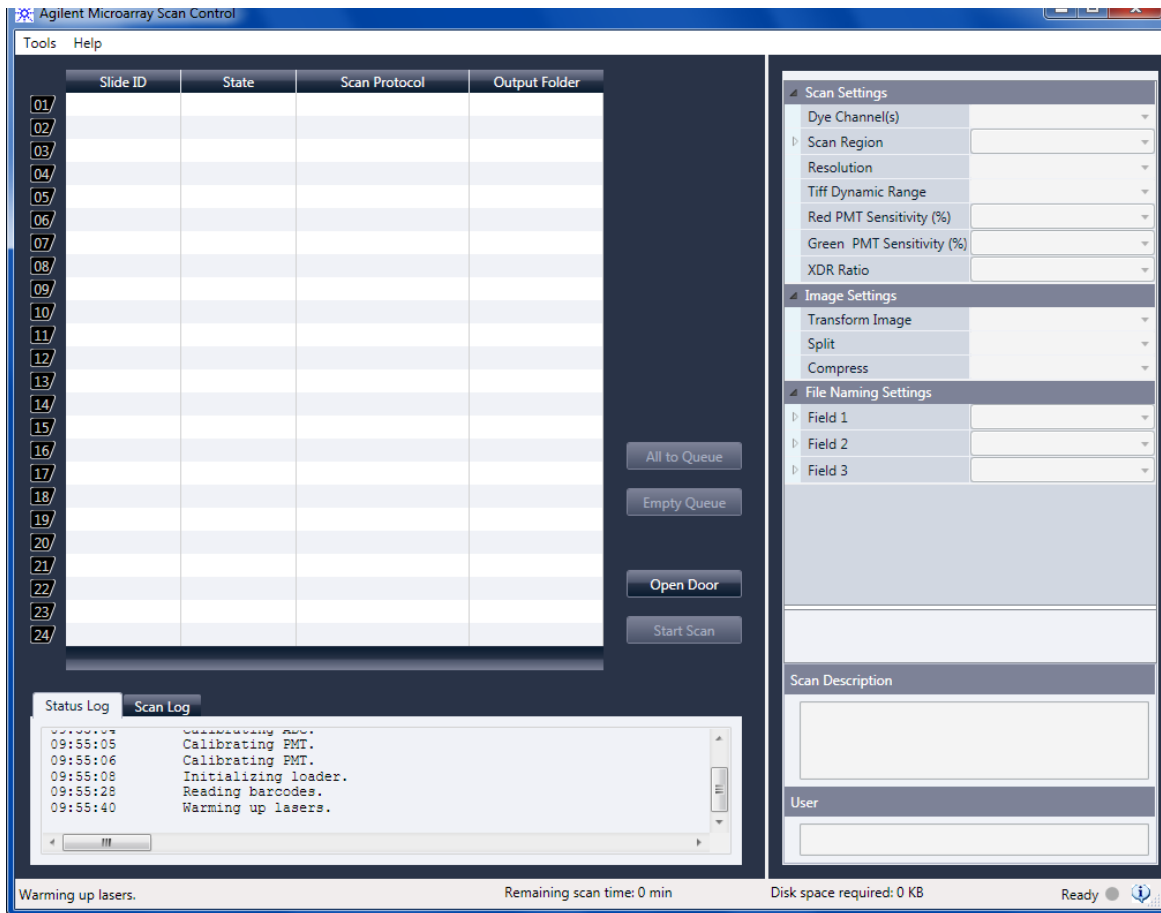
Когато програмата се стартира, основният прозорец на програмата Agilent Microarray Scan Control се отваря и скенерът изпълнява своята последователност за инициализация. След като последователността за инициализация завърши, бутонът Open Door (Отваряне на вратичка) ще стане достъпен и ще можете да заредите слайдове. Вж. [Фигура 37](#) на страница 140.

### ЗАБЕЛЕЖКА

Ако в скенера има заредени 24 слайда, когато го включите, инициализацията ще бъде неуспешна, тъй като няма да може да осъществи цикъла за изваждане на слайдове.

## 7 Basic Instructions for Use

### Инструкции за работа



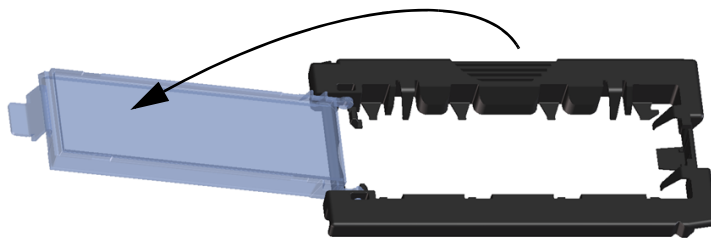
Фигура 37 Прозорец на програмата Agilent Microarray Scan Control – готовност за добавяне на слайдове.

Състоянието на скенера се указва в долния десен ъгъл на прозореца на Scan Control (Контрол на сканиране) – в лентта на състоянието.

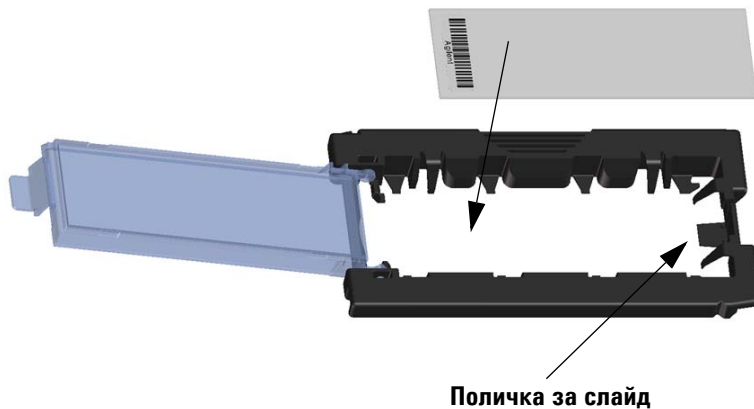
*Пръстовите отпечатъци причиняват грешки при флуоресцентната детекция. Докосвайте само краищата на слайда и винаги използвайте ръкавици, когато боравите със слайдове.*

## Стъпка 2. Поставете слайдове в държачите за слайдове

- 1 Преди да поставите слайда, поставете държача за слайдове на равна повърхност, като прозрачният капак е нагря, а палецът – отдясно. Това ще помогне да гарантирате, че слайдът ще е правилно ориентиран, когато го поставяте в държача за слайдове.
- 2 Внимателно натиснете навътре и издърпайте нагоре края, използвайки палеца на прозрачния пластмасов капак, за да го отворите.



**Фигура 38** Отваряне на държача за слайдове



**Фигура 39** Поставяне на слайд в държача за слайдове

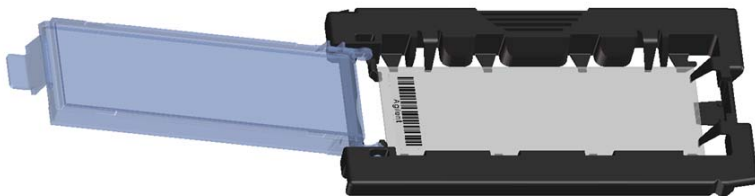
- 3 Поставете слайда в държача, както следва:
  - a Дръжте слайда в края откъм баркода.
  - b Уверете се, че повърхността с активната микроматрица е нагоре, към капака на слайда, като баркодът е вляво.
  - c Внимателно поставете края на слайда без етикета с баркод върху поличката за слайд. Вж. [Фигура 39](#).
  - d Внимателно спуснете слайда в държача за слайдове. Вж. [Фигура 40](#).
  - e Затворете пластмасовия капак за слайда, като натискате края с палеца, докато не чуete щракване. Това ще приважи слайда на точното място в държача.
  - f Внимателно натиснете навътре и издърпайте нагоре края, използвайки палеца на прозрачния пластмасов капак, за да го отворите отново, и проверете дали слайдът е правилно позициониран.

След като веднъж е поставен, слайдът лежи равно и е изравнен с точките за подравняване на държача за слайдове.
  - g Затворете пластмасовия капак за слайда, като натискате края с палеца, докато не чуete щракване. Вж. [Фигура 41](#).

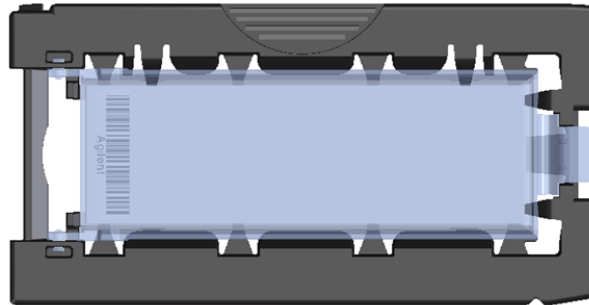


#### ВНИМАНИЕ

Ако палецът на пластмасовия капак за слайда е прекомерно разпънат, е възможно да не щракне на правилното място. Изхвърляйте държачите за слайдове, при които не чувате щракване при затварянето им.



**Фигура 40** Слайд, поставен в държача за слайдове



**Фигура 41** Държач за слайдове – затворен със слайд

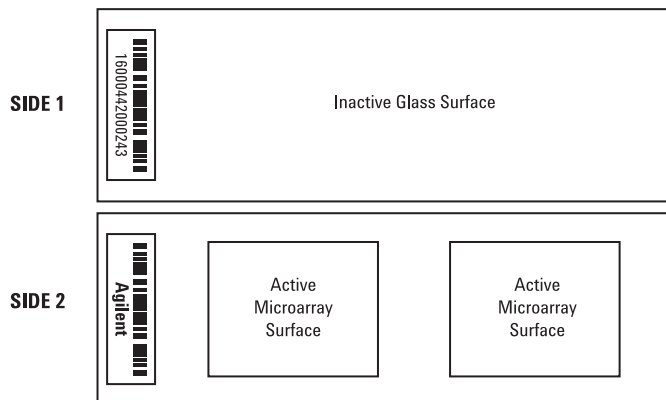
Слайдовете на Agilent имат два баркода – по един от всяка страна на стъклото. Вж. **Фигура 42**. Поставете страната с активната микроматрица на слайда с лице към капака на държача за слайдове.



**ВНИМАНИЕ**

Неправилно поставеният слайд може да повреди скенера SureScan Dx.

**Double-barcoded slide example**



**Фигура 42** Ориентация на слайда

#### Стъпка 3. Заредете държачите за слайдове в касетата

- 1 В прозореца на програмата Scan Control (Контрол на сканиране) щракнете върху **Open Door** (Отваряне на вратичка), за да отворите вратичката на скенера.



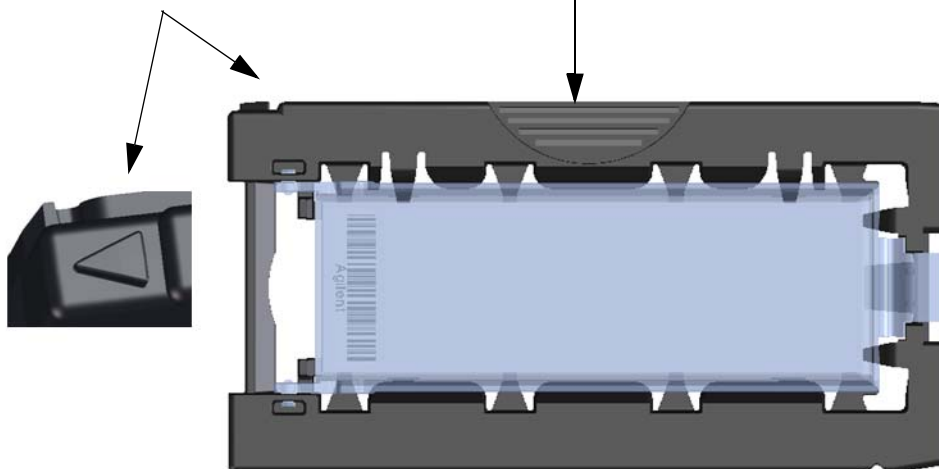
#### ВНИМАНИЕ

Правилният начин за отваряне на вратичката на скенера е да използвате бутона Open Door (Отваряне на вратичка) в програмата Scan Control (Контрол на сканиране). Не опитвайте да отворите вратичката ръчно.

- 2 Хванете държача за слайдове за оребрения участък. Стрелката отгоре на държача за слайдове сочи наляво, когато сте хванали правилно държача за слайдове. Вж. [Фигура 43](#).

Стрелката помага да определите ориентацията на скенера

Оребрен участък



**Фигура 43** Държачът за слайдове ви помага да поставите слайдовете правилно



Поставете държача за слайдове в който и да е празен слот. Номерата на слотовете са ясно посочени на касетат за слайдове. Не натискайте насила държача за слайдове в касетата; той се поставя лесно, ако е правилно подравнен с оребрения участък отгоре и стрелката – сочеща наляво.



Фигура 44 Поставяне на държача за слайдове в касетата

- 3 Уверете се, че държачът за слайдове е разположен в дъното на слота на касетата.  
Номерът на слота за заредения слайд мига в синьо.
- 4 Повторете стъпки от 2 до 3, докато всички държачи за слайдове са заредени в касетата.



**ВНИМАНИЕ**

Неправилното поставяне на държача за слайдове в касетата може да доведе до голяма повреда на SureScan Dx Microarray Scanner.

- 5 В програмата Scan Control (Контрол на сканиране) щракнете върху **Close Door** (Затваряне на вратичка).

За слайдове, които към своя дизайн нямат присвоен протокол за сканиране, протоколът за сканиране остава празен и състоянието на слота остава "Present" (Присъства). Назначете протокол за сканиране според описаното в "Стъпка 4. Задайте или променете настройките на протокол за сканиране".

*Текущите настройки на протокола за сканиране са показани за всеки избран слайд в десния панел на основния прозорец на софтуера Scan Control (Контрол на сканиране).*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-цветни микроматрици за генна експресия
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-цветни микроматрици за генна експресия
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-цветни микроматрици за генна експресия
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-цветни микроматрици за генна експресия
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP микроматрици
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP микроматрици
<b>AgilentHD_miRNA</b>	Agilent HD miRNA микроматрици
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA микроматрици

#### Стъпка 4. Задайте или променете настройките на протокол за сканиране

Първия път, когато извършвате настройка за сканиране на даден слайд, изберете протокол за сканиране, който да използвате.

- За всеки отделен слайд в таблицата за слотове щракнете върху Scan Protocol (Протокол за сканиране) и изберете даден протокол за сканиране, който да използвате за сканирането на слайда.

Agilent предоставя осем предварително заредени протокола, от които да изберете и които да използвате с микроматриците с висока плътност Agilent high density (HD) и матриците Agilent G3.

#### Стъпка 5. (По избор) Променете изходната папка

Можете да промените указаната изходна папка, където програмата записва файловете с изображения, създадени от скенера.

- За всеки слайд в таблицата за слотове щракнете върху Output Folder (Изходна папка) и отидете до местоположението а желаната папка.

Agilent препоръчва да изберете локална папка на вторичен твърд диск.

#### Стъпка 6. Добавете слайдове към опашката за сканиране

- 1 В основния прозорец на Scan Control (Контрол на сканиране) щракнете върху **All to Queue** (Всички в опашката), за да добавите всички слайдове в таблицата за слотове със състояние "Ready for queue" (Готовнот за опашка) към опашката за сканиране.

Ще се покаже диалогов прозорец за потвърждение. Щракнете върху **Yes** (Да), за да добавите слайдовете към опашката.

ИЛИ

В таблицата за слотове на Scan Control (Контрол на сканиране) щракнете върху клетката **State** (Състояние) за първия слайд, който ще се сканира, след което щракнете върху **Add to Queue** (Добавяне към опашката).

- 2 За всеки допълнителен слайд, който искате да сканирате:
  - Щракнете върху клетката **State** (Състояние) и изберете **Add to queue first** (Добавяне като първи към опашката), за да добавите слайда най-отгоре в опашката за сканиране.

ИЛИ

- Щракнете върху клетката **State** (Състояние) и изберете **Add to queue last** (Добавяне като последен към опашката), за да добавите слайда най-отдолу в опашката за сканиране.

Ако трябва да премахнете всички слайдове от опашката, щракнете върху **Empty Queue** (Изпразване на опашката) в основния прозорец на Scan Control (Контрол на сканиране).

### Стъпка 7. Сканирайте слайдовете

- 1 Ако е необходимо, в основния прозорец на Scan Control (Контрол на сканиране) щракнете върху **Close Door** (Затваряне на вратичка).  
Изчакайте, докато вратичката се затвори и бутонът **Start Scan** (Старт на сканиране) се активира.
- 2 В основния прозорец на Scan Control (Контрол на сканиране) щракнете върху **Start Scan** (Старт на сканиране), за да започнете сканирането на слайдовете, които са добавени в опашката.

### Стъпка 8. Премахнете слайдовете

- 1 В основния прозорец на Scan Control (Контрол на сканиране) щракнете върху **Open Door** (Отваряне на вратичка), за да отворите вратичката на скенера.
- 2 Отворете вратичката на скенера и извадете държачите за слайдове от касетата.
- 3 Извадете слайдовете от държачите за слайдове, както следва:
  - a Хванете държача за слайдове отстрани, като логото Agilent е нагоре.
  - b Внимателно натиснете навътре и издърпайте нагоре края, използвайки палеца на прозрачния пластмасов капак, за да го отворите.
  - c Бутнете нагоре края с баркода на слайда от долната страна на държача за слайдове, за да не оставите пръстов отпечатъци върху областта на пробата.
  - d Хванете слайда за страните и го извадете от държача за слайдове.

## Základní pokyny

### Bezpečnostní symboly umístěné na skeneru



#### Symbol NEBEZPEČÍ SKŘÍPNUTÍ

Tento symbol je umístěn na takovém místě výrobku, kde hrozí riziko skřípnutí rukou nebo prstů. Udržujte ruce v dostatečné vzdálenosti od pohyblivých částí v takto označené oblasti.

### Bezpečnostní pokyny

Skener je konstruovaný tak, aby byl bezpečný a snadno použitelný. Před použitím skeneru SureScan Dx se ujistěte, že správně rozumíte všem varováním a upozorněním a že je dodržujete.



#### VAROVÁNÍ

Nepokoušejte se opravit nebo získat přístup k vnitřním součástkám skeneru SureScan Dx. Vystavujete se riziku zasažení vysokým napětím a škodlivým laserovým zářením. Odstraněním hlavního krytu pozbývá záruka platnosti.



#### VAROVÁNÍ

Připojte skener SureScan Dx k uzemněné elektrické zásuvce. Tím bude zajištěna bezpečnost.



#### UPOZORNĚNÍ

Za účelem minimalizace vibrací vznikajících díky rychlému snímání laserového buzení prostřednictvím mikročipu, instalujte skener na stabilní laboratorní lavici nebo stůl. Neinstalujte skener v blízkosti jiného laboratorního vybavení, které by mohlo být zdrojem vibrací.



#### UPOZORNĚNÍ

Skener SureScan Dx je citlivý na podmínky, při nichž dochází ke kondenzaci vzdušné vlhkosti. Dodržujte opatření uvedená v dokumentaci produktu. Viz "Hladina vlhkosti ovzduší" na straně 149.

## Hladina vlhkosti ovzduší

Skener SureScan Dx je citlivý na podmínky, při nichž dochází ke kondenzaci vzdušné vlhkosti. Přepravní krabici nechte vždy stát na místě určení po dobu 12 hodin pro dosažení vyrovnaní teplot.

Pro dosažení optimálního výkonu pracujte se skenerem SureScan Dx pouze v následujícím rozsahu hladin vlhkosti ovzduší.

Provozní hodnoty: 15 % až 85 % RV při 30 °C

## Návod k obsluze

### Krok 1. Zapněte skener SureScan Dx Microarray a spusťte program Scan Control

- 1 Zapněte skener SureScan Dx pomocí vypínače na přední straně přístroje.
- 2 Zapněte počítač a počkejte, než dojde ke spuštění operačního systému.
- 3 Pro spuštění programu Scan Control dvakrát klikněte na ikonu **Agilent Microarray Scan Control**.



**Obrázek 36** Ikona programu Agilent Microarray Scan Control

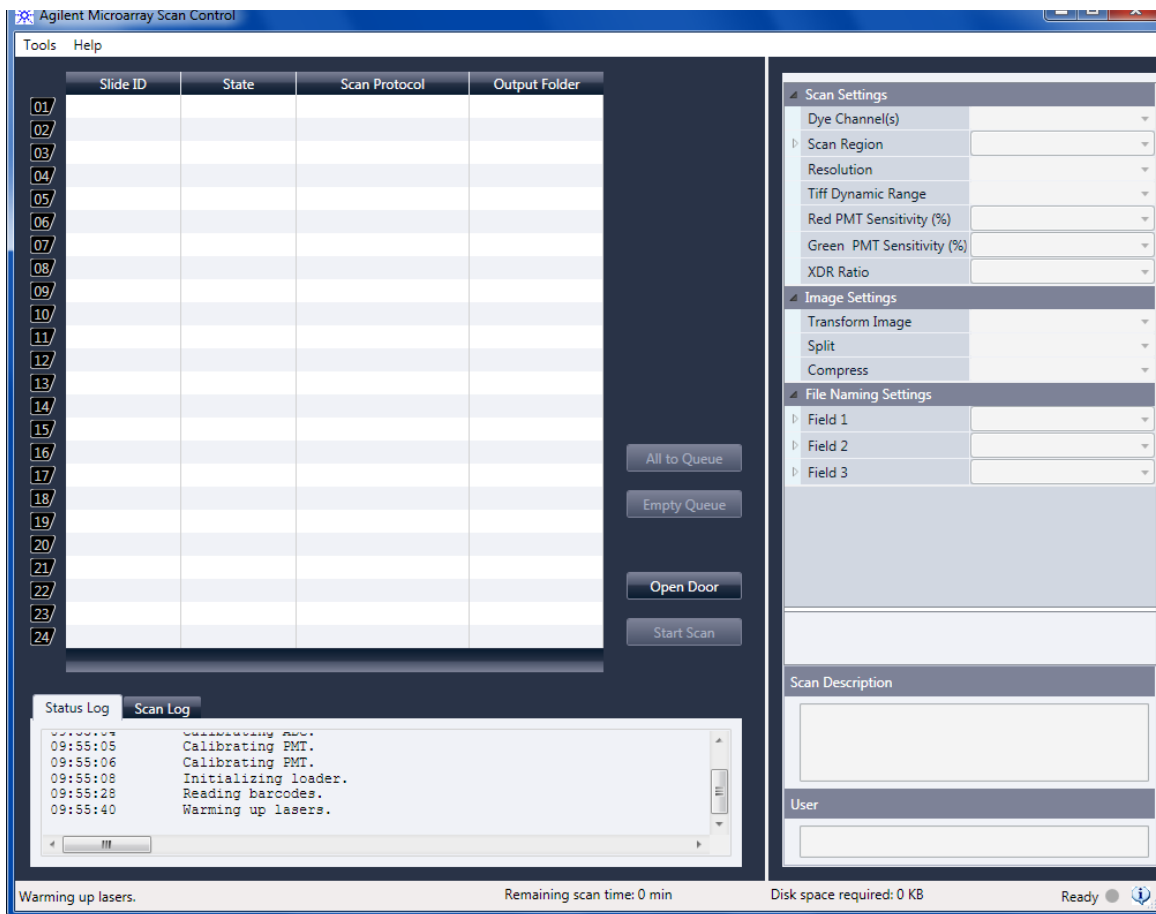
Jakmile se program spustí, otevře se hlavní okno programu Agilent Microarray Scan Control a skener provede inicializační sekvenci. Po ukončení inicializační sekvence dojde k aktivaci tlačítka Open Door (otevřít dvířka) a k umožnění vložení čipů. Viz [Obrázek 37](#) na straně 150.

### POZNÁMKA

Je-li ve skeneru při jeho spuštění umístěno 24 čipů, inicializace neproběhne, protože nelze provést cyklus vysunutí čipu.

## 7 Basic Instructions for Use

### Návod k obsluze



**Obrázek 37** Okno programu Agilent Microarray Scan Control – připraven pro vkládání čipů.

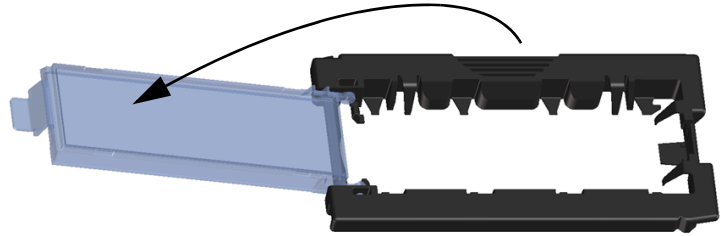
Stav skeneru je zobrazen v pravém dolním rohu okna programu Scan Control, ve stavovém řádku.

### Krok 2. Vložte čipy do držáků

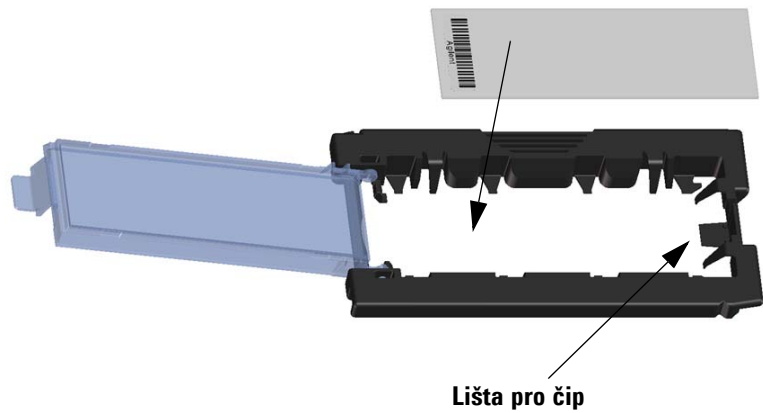
*Otisky prstů způsobují chybu fluorescenční detekce. Dotýkejte se pouze okrajů čipu a vždy použijte ochranné rukavice při manipulaci s čipy.*

- 1 Před vložením čipu umístěte držák na rovný povrch průsvitným krytem směrem nahoru tak, aby byla západka umístěna vpravo. Tím dojde k zajištění správného zarovnání čipu při vložení do držáku.

- 2 Pro otevření držáku jemně zatlačte na západku a odklopte průsvitný plastový kryt.



**Obrázek 38** Otevření držáku čipu



**Obrázek 39** Vložení čipu do držáku

- 3 Vložte čip do držáku následujícím způsobem:
- a Držte čip za okraj, kde je umístěn čárový kód.
  - b Ujistěte se, že aktivní povrch čipu směřuje nahoru ke krytu a že je čárový kód umístěn na levé straně.
  - c Opatrně umístěte okraj čipu bez čárového kódu na lištu držáku. Viz [Obrázek 39](#).
  - d Opatrně spusťte čip do držáku. Viz [Obrázek 40](#).
  - e Zavřete plastový kryt a zatlačte na západku, dokud neuslyšíte cvaknutí. Tím dosáhnete správného umístění čipu v držáku.
  - f Jemně zatlačte na západku, znovu odklopte průsvitný plastový kryt a ujistěte se, že je čip správně umístěn.  
Po vložení leží čip na plocho a je zarovnan s kontrolními body na držáku.
  - g Zavřete plastový kryt a zatlačte na západku, dokud neuslyšíte cvaknutí. Viz [Obrázek 41](#).



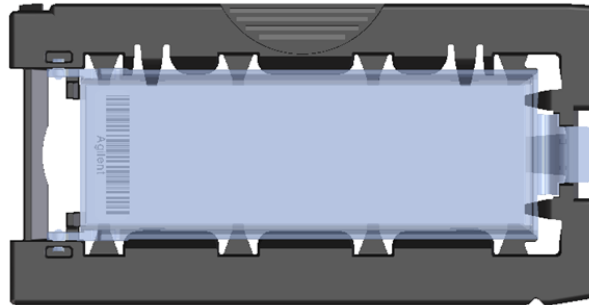
**UPOZORNĚNÍ**

Je-li západka plastového krytu opotřebovaná, nemusí správně zapadnout na své místo. Zlikvidujte všechny držáky, při jejichž zavření se již neozývá cvaknutí.



**Obrázek 40** Čip umístěn v držáku





**Obrázek 41** Držák čipu – zavřený, s čipem

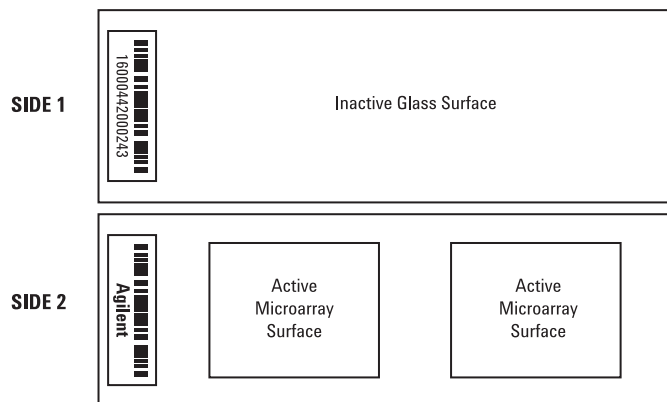
Čipy Agilent mají dva čárové kódy, každý na jedné straně skla. Viz **Obrázek 42**. Umístěte aktivní povrch čipu tak, aby směřoval nahoru ke kryptu.



**UPOZORNĚNÍ**

Nesprávně umístěný čip může poškodit skener SureScan Dx.

**Double-barcoded slide example**



**Obrázek 42** Orientace čipu

### Krok 3. Vložte držáky do zásobníku

- 1 Pro otevření dvířek skeneru klikněte v okně programu Scan Control na **Open Door** (otevřít dvířka).



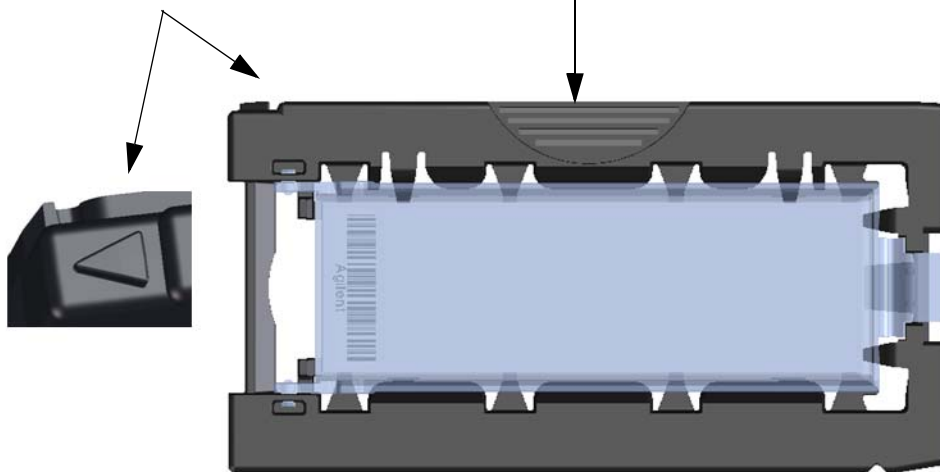
#### UPOZORNĚNÍ

Správný způsob, jak otevřít dvířka skeneru je použití tlačítka Open Door (otevřít dvířka) v programu Scan Control. Nepokoušejte se otevřít dvířka manuálně.

- 2 Uchopte držák za vyznačený výčnělek a zvedněte jej. Zvednete-li držák čipy správně, šipka na jeho horní straně směřuje doleva. Viz [Obrázek 43](#).

Šipka pomáhá identifikovat orientaci skeneru

Výčnělek určený pro uchopení držáku



Obrázek 43 Držák pomáhá vložit čip správně

Vložte čip do libovolného otevřeného slotu. Čísla slotů jsou jasně označena na zásobníku. Nepoužívejte ke vložení držáku do zásobníku sílu. Je-li držák umístěn správně výčnělkem pro uchopení nahoru a šipkou směřující doleva, dojde ke snadnému vložení.



**Obrázek 44** Vložení čipu do zásobníku

- 3 Ujistěte se, že držák čipů sedí zcela ve spodní části slotu zásobníku.  
Číslo slotu vloženého čipu bliká modře.
- 4 Opakujte kroky 2 a 3, dokud nejsou všechny držáky vloženy v zásobníku.



**UPOZORNĚNÍ**

Nesprávné umístění držáku v zásobníku může mít za následek vážné poškození skeneru SureScan Dx Microarray.

- 5 V programu Scan Control klikněte na **Close Door** (zavřít dvířka).

U snímků, které nemají implementován skenovací protokol, zůstává tento prázdný a stav slotu zůstává na hodnotě „Present“ (dosavadní). Přiřadte skenovací protokol tak, jak je popsáno v bodě [“Krok 4. Nastavení nebo změna parametrů skenovacího protokolu”](#).

*Aktuální nastavení parametrů skenovacího protokolu je zobrazeno pro každý vybraný čip v pravém podokně hlavního okna programu Scan Control.*

<b>AgilentHD_GX_2Color</b>	Čipy Agilent HD 2-barevné zobrazení genu
<b>AgilentHD_GX_1Color</b>	Čipy Agilent HD 1-barevné zobrazení genu
<b>AgilentG3_GX_2Color</b>	čipy Agilent G3 2-barevné zobrazení genu
<b>AgilentG3_GX_1Color</b>	Čipy Agilent G3 1-barevné zobrazení genu
<b>AgilentHD_CGH</b>	Čipy Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Čipy Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Čipy Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Čipy Agilent G3 miRNA

#### Krok 4. Nastavení nebo změna parametrů skenovacího protokolu

Při prvním nastavení skenování čipu vyberte příslušný skenovací protokol.

- Pro výběr skenovacího protokolu pro každý čip v tabulce slotů klikněte na Scan Protokol a vyberte skenovací protokol pro skenování čipu.

Společnost Agilent dodává osm předinstalovaných protokolů, které lze zvolit a použít s čipy Agilent s vysokou hustotou (HD) a s čipy Agilent G3.

#### Krok 5. (Volitelný) Změna výstupní složky

Můžete změnit výstupní složku, kam program ukládá obrazové soubory vytvořené skenerem.

- Pro určení požadované složky pro každý čip v tabulce slotů klikněte na Output Folder (výstupní složka) a vyberte složku.

Společnost Agilent doporučuje vybrat lokální složku na sekundárním pevném disku.

#### Krok 6. Přidání čipu do fronty ke skenování (sekvence)

- 1 Pro přidání všech čipů se stavem „Ready for queue“ (připraven do fronty) uvedených v tabulce slotů do sekvence klikněte na **All to Queue** (všechny do fronty) v hlavním okně programu Scan Control.

Objeví se potvrzovací dialogové okno. Pro přidání čipů do fronty klikněte na **Yes** (Ano).

NEBO

V tabulce slotů v programu Scan Control klikněte na **State** (stav) pro první čip, který chcete skenovat a poté klikněte na **Add to Queue** (přidat do fronty).

2 Pro každý další čip, který chcete skenovat,

- klikněte na **State** (stav) a zvolte **Add to queue first** (přidat na začátek fronty) pro přidání čipu na začátek fronty.

NEBO

- Klikněte na **State** (stav) a zvolte **Add to queue last** (přidat na konec fronty) pro přidání čipu na konec fronty.

Je-li potřeba odebrat všechny čipy z fronty, klikněte v hlavním okně programu Scan Control na **Empty Queue** (prázdňá fronta).

## Krok 7. Provedení skenu vašich čipů

1 Je-li to nutné, klikněte v hlavním okně programu Scan Control na **Close Door** (zavřít dvířka).

Počkejte než dojde k zavření dvířek a k aktivaci tlačítka **Start Scan** (spustit sken).

2 Pro započítí skenování čipů, které byly přidáné do fronty, klikněte v hlavním okně programu Scan Control na **Start Scan** (spustit sken).

## Krok 8. Vyjmutí čipů

1 Pro otevření dvířek skeneru klikněte v hlavním okně programu Scan Control na **Open Door** (otevřít dvířka).

2 Otevřete dvířka skeneru a vyjměte držáky čipů ze zásobníku.

3 Vyjměte čipy z držáků následujícím způsobem:

- a Uchopte držák čipů po stranách tak, aby logo Agilent směřovalo nahoru.
- b Pro otevření držáku jemně zatlačte na západku a odklopte průsvitný plastový kryt.
- c Zvedněte čip na straně, kde je čárový kód. Proveďte tento úkon tak, aby se zabránilo vzniku otisku prstů na vzorku.
- d Uchopte čip za strany a odstraňte jej z držáku.

## Upute na hrvatskom jeziku

### Sigurnosni simboli na skeneru



#### Simbol OPASNOST OD NAGNJEČENJA

Ovaj simbol stavljen je na mjesta gdje postoji opasnost da vam proizvod zahvati ruke ili prste. Držite ruke dalje od pokretnih dijelova u ovom području.

### Sigurnosne smjernice

Skener SureScan Dx dizajniran je za sigurnu i jednostavnu upotrebu. Svakako prije korištenja skenera SureScan Dx s razumijevanjem proučite sva upozorenja i mjere opreza.



#### UPOZORENJE

Ne pokušavajte popraviti ili pristupati internim komponentama skenera SureScan Dx. Tako se možete izložiti visokom naponu i štetnom laserskom zračenju. Ako uklonite glavni poklopac, jamstvo se poništava.



#### UPOZORENJE

Priključite skener SureScan Dx u uzemljenu naponsku utičnicu. Sigurnost skenera ovisi o korištenju zaštitne utičnice s uzemljenjem.



#### OPREZ

Da biste minimizirali vibracije uslijed brzog *microarray* skeniranja laserskom ekscitacijom, skener instalirajte na čvrstu laboratorijsku klupu ili stol. Ne postavljajte skener blizu druge laboratorijske opreme koja može uzrokovati vibracije.



#### OPREZ

Skener SureScan Dx osjetljiv je na kondenzaciju. Slijedite mjere opreza navedene u dokumentaciji uz proizvod. Pogledajte odjeljak "Vlaga" na stranici 159.

## Vlaga

Skener SureScan Dx osjetljiv je na kondenzaciju. Uvijek pričekajte 12 sati da se proizvod termički prilagodi lokaciji prije otvaranja kutije u kojoj je isporučen.

Da biste osigurali optimalne performanse skenera SureScan Dx, koristite ga samo unutar sljedećeg raspona vlažnosti zraka.

Rad: 15% do 85% relativne vlažnosti pri 30 °C

## Upute za korištenje

### 1. korak Uključite skener SureScan Dx i pokrenite program Scan Control

- 1 Uključite skener SureScan Dx putem prekidača napajanja na prednjoj strani uređaja.
- 2 Uključite računalnu radnu stanicu i pričekajte da se pokrene.
- 3 Dvokliknite ikonu **Agilent Microarray Scan Control** da biste pokrenuli program Scan Control.



**slika 36** Ikona Agilent Microarray Scan Control

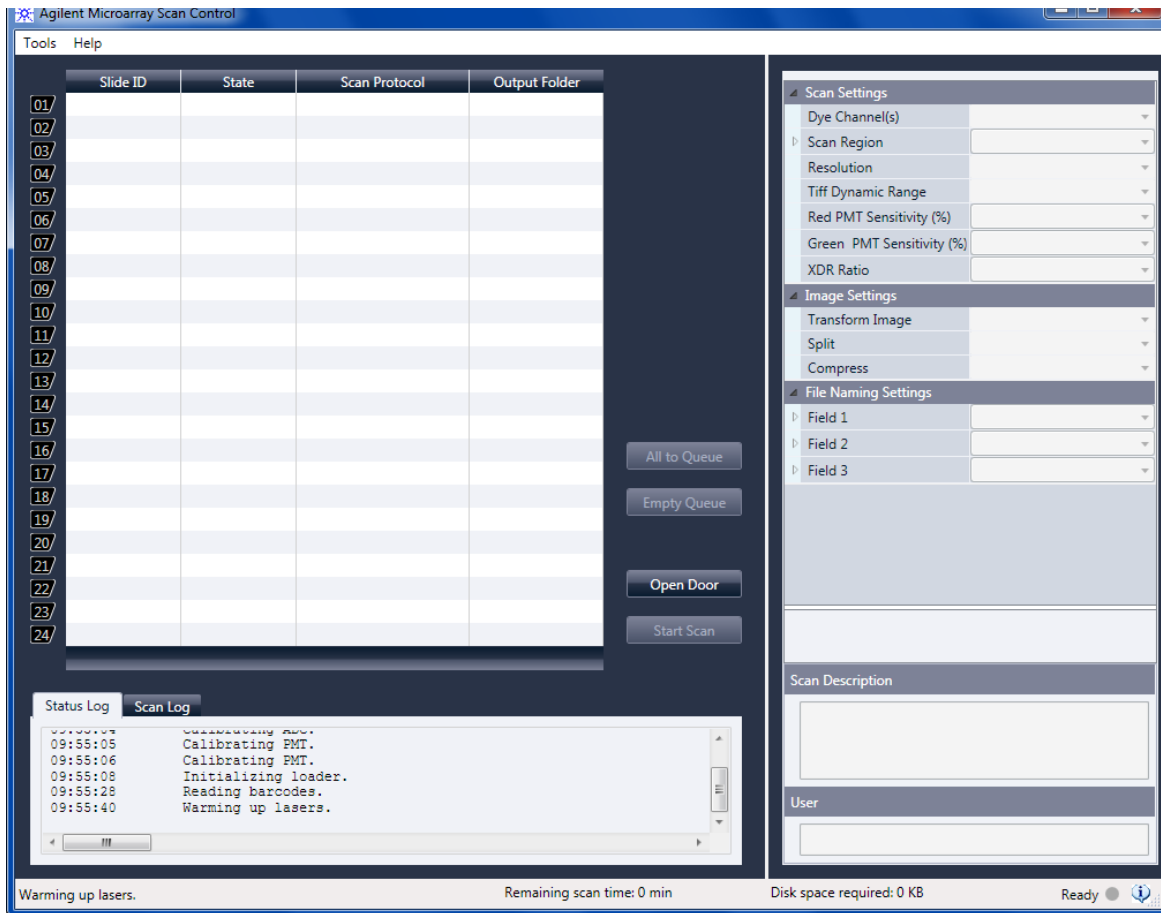
Kada se program pokrene, otvara se glavni prozor programa Agilent Microarray Scan Control, a skener izvršava inicijalizaciju. Po dovršetku inicijalizacije omogućen je gumb Open Door (Otvori vrata) pa možete umetati slajdove. Pogledajte odjeljak [slika 37](#) na stranici 160.

### NAPOMENA

Ako su u skener umetnuta 24 slajda kada ga uključite, inicijalizacija neće uspjeti jer skener ne može izvršiti ciklus izbacivanja slajdova.

## 7 Basic Instructions for Use

### Upute za korištenje



slika 37 Prozor programa Agilent Microarray Scan Control – spreman za dodavanje slajdova.

Status skenera vidljiv je u donjem desnom kutu prozora Scan Control u traci stanja.

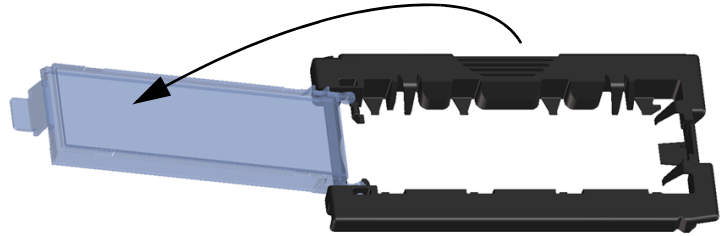
### 2. korak Umetnite slajdove u držače slajdova

*Otisci prstiju uzrokuju pogreške pri detekciji fluorescencijom. Dodirujte samo rubove slajda i uvijek slajdovima rukujte u rukavicama.*

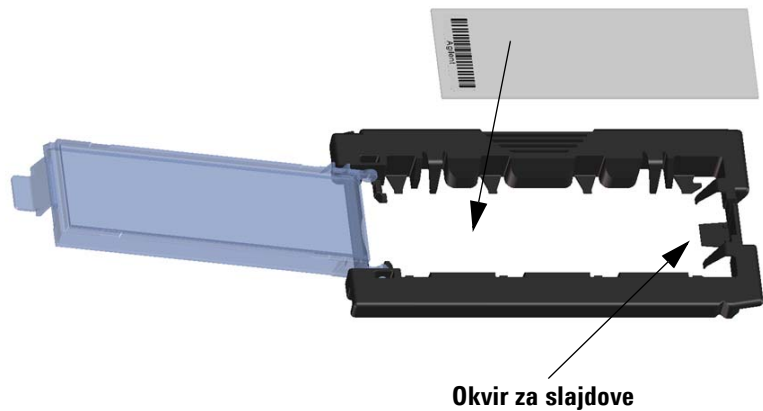
- 1 Prije no što umetnete slajd, držač slajda postavite na ravnu površinu tako da je prozirna strana okrenuta prema gore, a da se jezičac nalazi s desne strane. To vam olakšava ispravno poravnanje slajda kada ga umetnete u držač slajdova.



- 2 Lagano pritisnite kraj s jezičcem na prozirnrom plastičnom poklopcu i povucite ga prema gore da biste ga otvorili.



slika 38 Otvaranje držača slajdova



slika 39 Umetanje slajda u držač slajdova

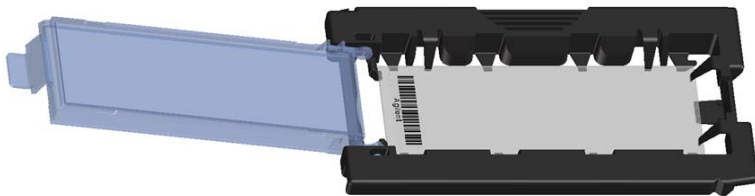
40 Umetnite slajd u držač slajdova kako slijedi:

- a Držite slajd na kraju s bar kodom.
- b Pazite da je aktivna *microarray* površina okrenuta prema gore, odnosno prema poklopcu slajda, tako da je bar kod s lijeve strane.
- c Pažljivo stavite kraj slajda bez oznake bar koda na okvir slajda. Pogledajte odjeljak [slika 39](#).
- d Lagano spustite slajd u držač slajdova. Pogledajte odjeljak [slika 40](#).
- e Zatvorite plastični poklopac slajda tako da gurnete jezičac sve dok ne začujete "klik". Time se slajd pomiče na mjesto u držaču.
- f Lagano pritisnite kraj s jezičcem na prozirnem plastičnom poklopcu i povucite ga prema gore da biste ga ponovno otvorili i provjerili je li slajd ispravno namješten.  
Nakon umetanja slajd je postavljen ravno i poravnat s točkama poravnanja na držaču.
- g Zatvorite plastični poklopac slajda tako da gurnete jezičac sve dok ne začujete "klik". Pogledajte odjeljak [slika 41](#).

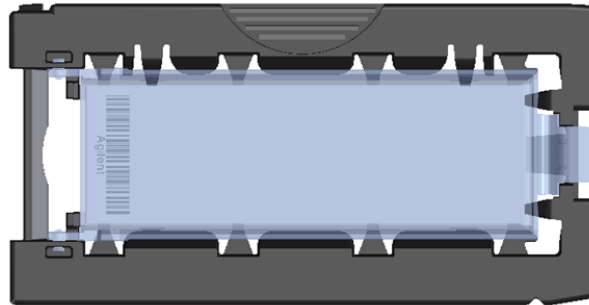


**OPREZ**

Ako je jezičac na plastičnom poklopcu slajda previše rastegnut, možda neće pravilno sjesti na mjesto uz "klik". Prikladno zbrinite držače slajdova koji više ne proizvode zvuk "klik" kada ih zatvorite.



**slika 40** Slajd umetnut u držač slajdova



slika 41 Držać slajdova – zatvoren sa slajdom

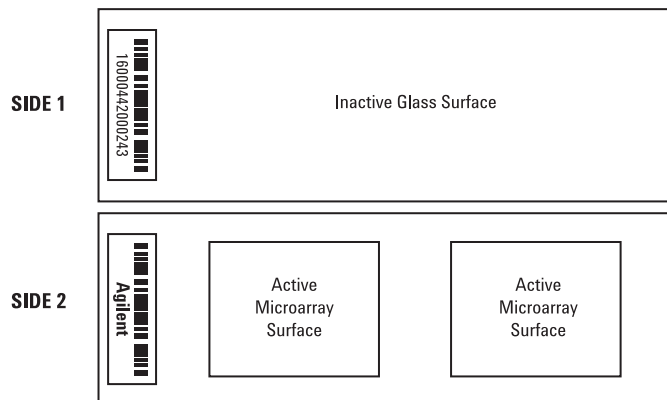
Agilent slajdovi imaju dva bar koda, po jedan na svakoj strani stakla. Pogledajte odjeljak [slika 42](#). Postavite aktivnu microarray stranu slajda tako da je okrenuta prema poklopcu držača slajdova.



**OPREZ**

Ako nepravilno umetnete slajd, možete oštetiti skener SureScan Dx.

**Double-barcoded slide example**



slika 42 Orijehtacija slajda

### 3. korak Umetnite držače slajdova u kasetu

- 1 U prozoru programa Scan Control kliknite **Open Door** (Otvori vrata) da biste otvorili vrata skenera.



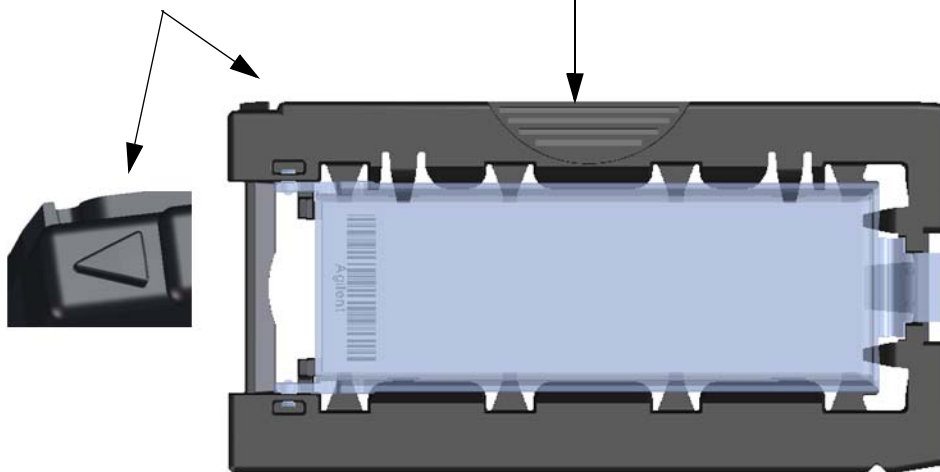
#### OPREZ

Vrata skenera ispravno se otvaraju putem gumba Open Door (Otvori vrata) u prozoru programa Scan Control (Kontrola skeniranja). Ne pokušavajte ručno otvoriti vrata.

- 2 Podignite držač slajdova držeći ga za hvatište za prste. Strelica na vrhu držača slajdova pokazuje ulijevo ako ste držač podignuli ispravno. Pogledajte odjeljak [slika 43](#).

Strelica olakšava identifikaciju  
orijentacije skenera

Hvatište za prste



**slika 43** Držač slajdova olakšava vam ispravno umetanje slajdova

Umetnite držač slajdova u bilo koji otvoreni utor. Brojevi utora jasno su označeni na kaseti slajda. Ne gurajte na silu držač slajdova u kasetu; možete ga jednostavno umetnuti ako ga ispravno poravnate s hvatištem za prste i ako je strelica okrenuta ulijevo.



**slika 44** Umetanje držača slajdova u kasetu

**3** Provjerite je li držač slajdova namješten na dnu utora za kasetu.

Broj utora u koji je umetnut slajd trepće plavo.

**4** Ponavljajte korake 2 do 3 dok ne umetnete sve držače slajdova u kasetu.



**OPREZ**

Nepravilno postavljanje držača slajda u kasetu može uzrokovati ozbiljno oštećenje skenera SureScan Dx.

**5** U programu Scan Control kliknite **Close Door** (Zatvori vrata).

Za slajdove kojima protokol skeniranja nije mapiran sukladno njihovom dizajnu, protokol skeniranja ostaje prazan, a stanje slajda je "Present" (Prisutan). Dodijelite protokol skeniranja kao što je opisano u odjeljku ["4. korak Postavite ili promijenite postavke protokola skeniranja"](#).

Postavke trenutnog protokola skeniranja prikazane su za svaki odabrani slajd u desnom oknu glavnog prozora softvera Scan Control.

<b>AgilentHD_GX_2Color</b>	Agilent <i>microarray</i> visoke gustoće za izraz gena u dvije boje
<b>AgilentHD_GX_1Color</b>	Agilent <i>microarray</i> visoke gustoće za izraz gena u jednoj boji
<b>AgilentG3_GX_2Color</b>	Agilent <i>microarray</i> G3 za izraz gena u dvije boje
<b>AgilentG3_GX_1Color</b>	Agilent G3 <i>microarray</i> za izraz gena u jednoj boji
<b>AgilentHD_CGH</b>	Agilent <i>microarray</i> visoke gustoće CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Agilent <i>microarray</i> G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Agilent <i>microarray</i> visoke gustoće miRNA
<b>AgilentG3_miRNA</b>	Agilent <i>microarray</i> G3 miRNA

#### 4. korak Postavite ili promijenite postavke protokola skeniranja

Prvi put kada postavite skeniranje slajda, odaberite protokol skeniranja.

- Kliknite Scan protokol (Protokol skeniranja) za svaki slajd u tablici utora i odaberite protokol koji ćete koristiti za skeniranje slajda.

Agilent vam isporučuje osam unaprijed umetnutih protokola koje možete odabrati i koristiti s Agilent *microarray* visoke gustoće (HD) i Agilent *microarray* G3 slajdovima.

#### 5. korak (Opcija) Promijenite izlaznu mapu

Možete promijeniti navedenu izlaznu mapu u koju program sprema slikovne datoteke kreirane od strane skenera.

- Za svaki slajd u tablici utora kliknite Output Folder (Izlazna mapa) i pregledom pronađite mjesto željene mape.

Agilent preporučuje odabir lokalne mape na sekundarnom tvrdom disku.

#### 6. korak Dodavanje slajdova u red čekanja za skeniranje

1 U glavnom prozoru programa Scan Control kliknite **All to Queue** (Sve u red čekanja) da biste sve slajdove u tablici utora čije je stanje "Ready for queue" (Spremno za red čekanja) dodali u red čekanja za skeniranje.

Pojavljuje se dijaloški okvir za potvrdu. Kliknite **Yes** (Da) da biste slajdove dodali u red čekanja.

ILI

U tablici utora Scan Control kliknite ćeliju **State** (Stanje) za prvi slajd za skeniranje i kliknite **Add to Queue** (Dodaj u red čekanja).

- 2 Za svaki dodatni slajd koji želite skenirati, učinite sljedeće:
  - Kliknite ćeliju **State** (Stanje) i odaberite **Add to queue first** (Najprije dodaj u red čekanja) da biste slajd dodali na vrh reda čekanja za skeniranje.

ILI

- Kliknite ćeliju **State** (Stanje) i odaberite **Add to queue last** (Dodaj na kraj reda čekanja) da biste slajd dodali na kraj reda čekanja za skeniranje.

Ako morate ukloniti sve slajdove iz reda čekanja, kliknite **Empty Queue** (Isprazni red čekanja) u glavnom prozoru programa Scan Control.

## 7. korak Skenirajte slajdove

- 1 Po potrebi u programu Scan Control kliknite **Close Door** (Zatvori vrata).

Pričekajte dok se vrata ne zatvore te dok se ne omogući gumb **Start Scan** (Pokreni skeniranje).
- 2 U glavnom prozoru programa Scan Control kliknite **Start Scan** (Pokreni skeniranje) da biste počeli skenirati slajdove dodane u red čekanja.

## 8. korak Uklonite slajdove

- 1 U glavnom prozoru programa Scan Control kliknite **Open Door** (Otvori vrata) da biste otvorili vrata skenera.
- 2 Otvorite vrata skenera i uklonite držače slajdova iz kasete.
- 3 Uklonite slajdove iz držača slajdova kako slijedi:
  - a Držite držač slajdova za bočne strane tako da je logotip Agilent okrenut prema gore.
  - b Lagano pritisnite kraj s jezičcem na prozirnem plastičnom poklopcu i povucite ga prema gore da biste ga otvorili.
  - c Gurnite kraj slajda s bar kodom prema gore s donje strane držača slajda da ne biste ostavili otiske na području uzorka.
  - d Uhvatite slajd za bočne stranice i uklonite ga iz držača slajdova.

## Grundlæggende brugsanvisning

### Sikkerhedssymboler på scanneren



#### Symbol for KLEMNINGSFARE

Dette symbol er placeret på produktet, hvor det er muligt at klemme hænder eller fingre. Hold hænderne på afstand af bevægelige dele i dette område.

### Sikkerhedsretningslinjer

SureScan Dx-scanneren er konstrueret til sikker og enkel brug. Sørg for, at du forstår og overholder alle advarsler og råd før betjening af SureScan Dx-scanneren.



#### ADVARSEL

**Forsøg ikke at reparere eller at få adgang til interne komponenter i SureScan Dx-scanneren. Du risikerer at udsætte dig for højspænding eller skadelig laserstråling. Afmontering af hoveddækslet ugyldiggør garantien.**



#### ADVARSEL

**Tilslut SureScan Dx-scanneren en stikkontakt med jordforbindelse. Den er afhængig af en jordforbindelse af sikkerhedshensyn.**



#### FORSIGTIG

For at minimere vibrationer som følge af den hurtige scanning af laser-exciteringen over mikroarrayet bør scanneren monteres på en solid laboratoriebænk eller på et solidt bord. Undgå at montere scanneren i nærheden af laboratorieudstyr, der kan forårsage vibrationer.



#### FORSIGTIG

SureScan Dx-scanneren er følsom over for omgivelser med kondensationsfugt. Følg forholdsreglerne i produktdokumentationen. Se "Fugtige omgivelser" på side 169



## Fugtige omgivelser

SureScan Dx-scanneren er følsom over for omgivelser med kondensationsfugt. Vent altid 12 timer med at åbne kassen på montagestedet for at sikre termisk balance.

For at sikre den optimale ydelse bør SureScan Dx kun betjenes inden for følgende fugtighedsinterval.

Betjening: 15 % til 85 % RF ved 30 °C

## Betjeningsvejledning

### Trin 1. Tænd for SureScan Dx Microarray Scanner, og start programmet Scan Control

- 1 Tænd for SureScan Dx-scanneren via afbryderen på forsiden af instrumentet.
- 2 Tænd for computeren, og vent indtil den er klar.
- 3 Dobbeltklik på ikonet **Agilent Microarray Scan Control** for at starte Scan Control-programmet.



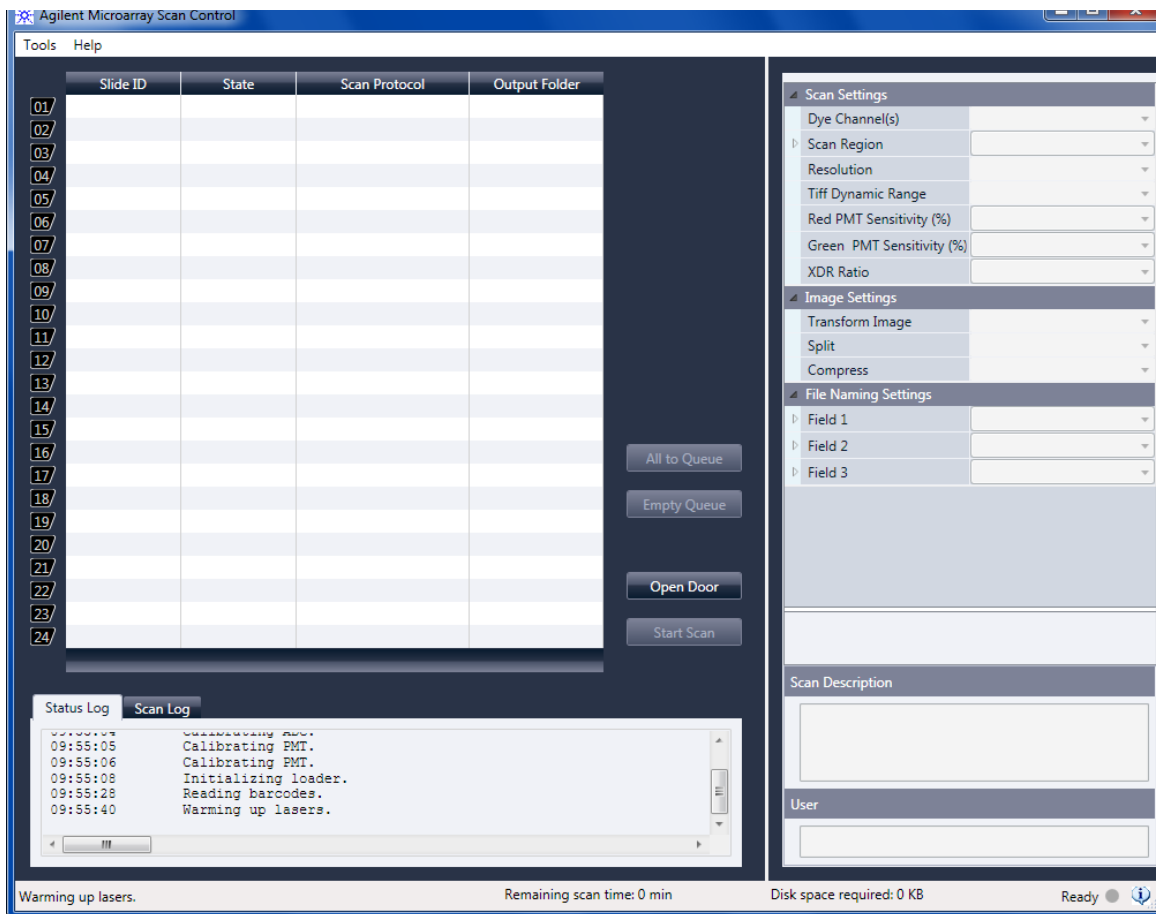
**Figur 36** Ikon for Agilent Microarray Scan Control

Når programmet starter, åbnes Agilent Microarray Scan Control-programmets hovedvindue, og scanneren udfører sin initialiseringssekvens. Efter initialiseringssekvensens afslutning, aktiveres knappen Open Door, og du kan indføre præparatglas. Se [Figur 37](#) på side 170.

### BEMÆRK

Hvis der er indført 24 glas i scanneren, når du tænder for den, mislykkes initialiseringen, da glasudføringscyklussen ikke kan gennemføres.

## 7 Basic Instructions for Use Betjeningsvejledning



**Figur 37** Agilent Microarray Scan Control-programmets vindue – klar til at tilføje glas.

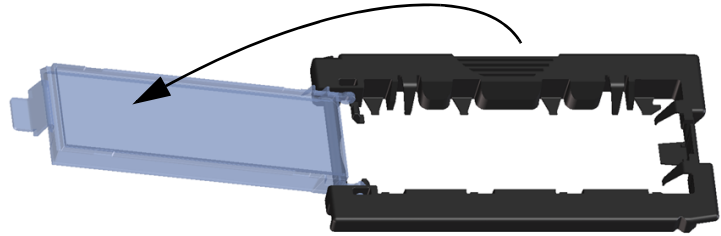
Scannerens status angives i nederste højre hjørne af Scan Control-vinduet på statuslinjen.

### Trin 2. Indfør glas i glasholderne

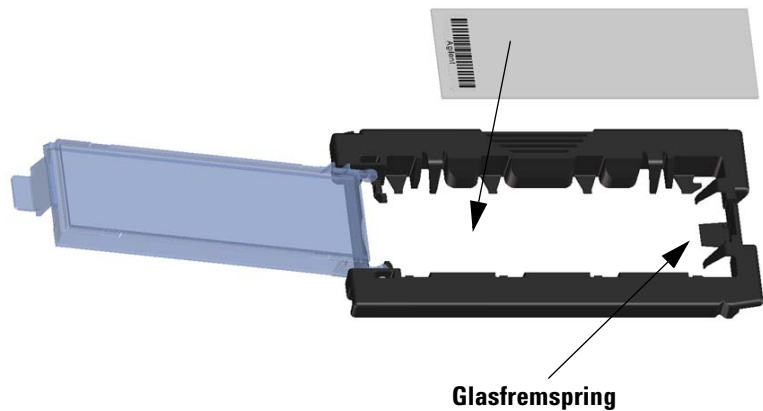
*Fingeraftryk kan forårsage fejl i registreringen af fluorescens. Berør kun kanterne på et glas, og anvend altid handsker ved håndtering af glas.*

- 1 Før du indfører et glas, placeres glasholderen på en plan overflade med det klare dæksel opad og tappet til højre. Dette hjælper med at sikre, at dit glas er placeret korrekt, når du indfører det i glasholderen.

- 2 Skub forsigtigt ind, og træk op i enden med tappen på det klare plastdæksel for at åbne det.



**Figur 38** Åbning af glasholderen



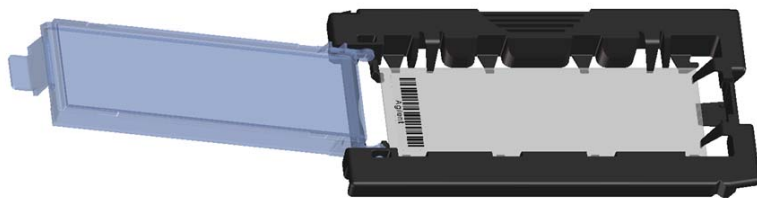
**Figur 39** Indføring af glas i glasholderen

- 3 Indfør et glas i holderen således:
- Hold fast i glasset i den ende, strekkoden sidder.
  - Sørg for, at den aktive mikroarray-overflade vender opad, mod glassdækslet, med strekkoden til venstre.
  - Placer forsigtigt den ende af glasset, som er uden strekkodemærkatene, på glassfremspringet. Se [Figur 39](#).
  - Sænk forsigtigt glasset ind i glasholderen. Se [Figur 40](#).
  - Luk plastdækslet ved at trykke på tappen, indtil du hører et "klik". Dette indfører glasset i den korrekte position i holderen.
  - Skub forsigtigt ind og træk op i tappen for enden af det klare plastdæksel for at åbne det igen, og kontrollér, at glasset sidder korrekt.  
Når det er indført, ligger glasset fladt, og passer sammen med justeringspunkterne på glasholderen.
  - Luk plastdækslet ved at trykke på tappen, indtil du hører et "klik". Se [Figur 41](#).

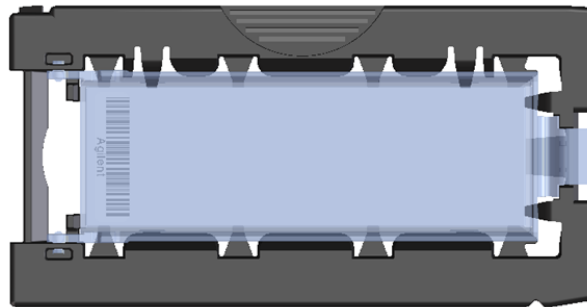


**FORSIGTIG**

Hvis tappen på plastdækslet overbelastes, vil den evt. ikke "klikke" korrekt på plads. Kassér glasholdere, der ikke længere klikker, når du lukker dem.



**Figur 40** Glas indført i glasholder



**Figur 41** Glasholder – lukket med glas

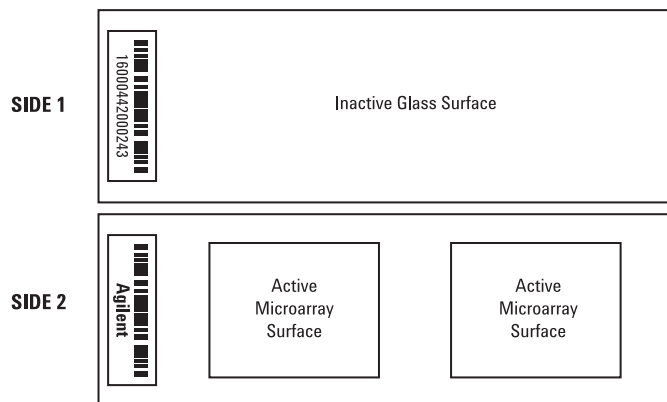
Agilent-glas har to stregkoder, en på hver side af glasset. Se [Figur 42](#) Placer siden med det aktive mikroarray mod glasholderens dæksel.



**FORSIGTIG**

Et forkert indført glas kan beskadige SureScan Dx-scanneren.

**Double-barcoded slide example**



**Figur 42** Orientering af glas

### Trin 3. Indfør glasholdere i kassetten

- 1 I Scan Control-programmets vindue skal du klikke på **Open Door** for at åbne scannerens dør.



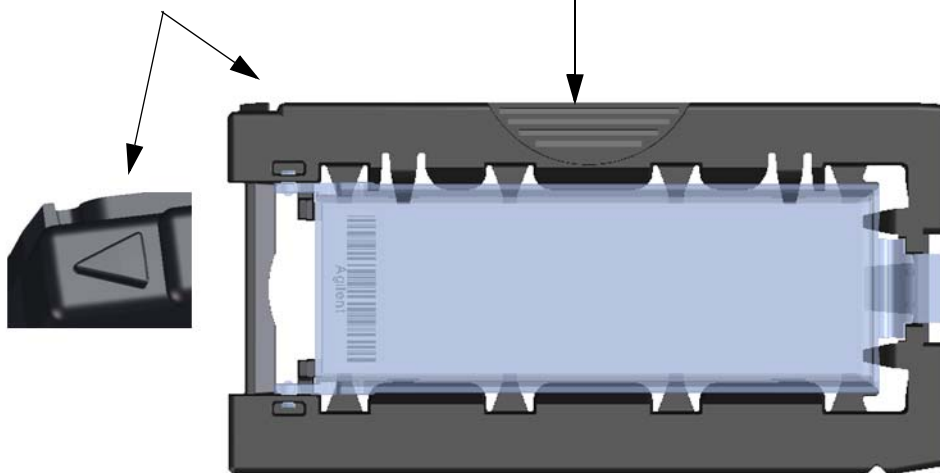
#### FORSIGTIG

Den korrekte måde at åbne scannerens dør på, er at anvende knappen Open Door i Scan Control-programmet. Forsøg ikke at åbne døren manuelt.

- 2 Tag glasholderen op ved hjælp af fingregrebet. Pilen øverst på glasholderen peger mod venstre, når du tager glasholderen korrekt op. Se [Figur 43](#).

Pile hjælper med at identificere scannerens orientering

Fingregreb



**Figur 43** Glasholderen hjælper dig med at indføre glasset korrekt

Indfør en glasholder i en ledig åbning. Åbningsnumrene er tydeligt markeret på glaskassetten. Undlad at presse glasholderen ind i kassetten. Den indføres nemt, hvis den er justeret korrekt ind, med fingergrebet på toppen og pilen pegende mod venstre.



**Figur 44** Indføring af glasholder i kassette

**3** Sørg for, at glasholderen er placeret helt ned i bunden af kassetteåbningen.

Åbningsnummeret for det indførte glas blinker blåt.

**4** Gentag trin 2 til 3, indtil alle glasholdere er indført i kassetten.



**FORSIGTIG**

Forkert placering af glasholderen i kassetten kan resultere i alvorlige skader på SureScan Dx Microarray Scanner.

**5** Klik på **Close Door** i Scan Control-programmet.

For glas, der ikke har en scanprotokol tilknyttet deres design, forbliver scanprotokollen tom, og åbningens status forbliver "Present". Tildel en scanprotokol som beskrevet i "[Trin 4. Indstil eller rediger indstillinger for scanprotokol](#)".

*De aktuelle indstillinger for scanprotokollen vises for hvert markeret glas i den højre rude af Scan Control-softwarens hovedvindue.*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-farvede mikroarrays til genudtryk
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-farvede mikroarrays til genudtryk
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-farvede mikroarrays til genudtryk
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-farvede mikroarrays til genudtryk
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP mikroarrays
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP mikroarrays
<b>AgilentHD_miRNA</b>	Agilent HD miRNA mikroarrays
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA mikroarrays

#### Trin 4. Indstil eller rediger indstillinger for scanprotokol

Første gang du konfigurerer scanning af et glas, skal du vælge den scanprotokol, du vil anvende.

- For hvert glas i åbningstabellen skal du klikke på Scan Protocol og vælge den scanprotokol, du vil bruge til scanning af glasset.

Agilent leverer otte forud indlæste protokoller, du kan vælge imellem og bruge sammen med Agilent high density (HD) mikroarrays og Agilent G3 mikroarrays.

#### Trin 5. (Valgfrit) Rediger resultatmappen

Du kan ændre den angivne resultatmappe, hvor programmet gemmer billedfilerne, der er oprettet af scanneren.

- For hvert glas i åbningstabellen klikkes på Output Folder, og den ønskede mappe vælges.

Agilent anbefaler at vælge en lokal mappe på en sekundær harddisk.

#### Trin 6. Føj glas til scanningskøen

- 1 I hovedvinduet for Scan Control skal du klikke på **All to Queue** for at føje alle glas i åbningstabellen med tilstanden "Ready for queue" til scanningskøen.

Der vises en dialogboks for at bekræfte. Klik på **Yes** for at føje glassene til køen.



ELLER

I Scan Control-åbningstabellen skal du klikke på **State**-cellen for det første glas, der skal scannes, og klikke på **Add to Queue**.

2 For hvert yderligere glas, du vil scanne:

- Klik på **State**-cellen og vælg **Add to queue first** for at føje glasset til toppen af scanningskøen.

ELLER

- Klik på **State**-cellen og vælg **Add to queue last** for at føje glasset til bunden af scanningskøen.

Hvis du vil fjerne alle glas fra køen, skal du klikke på **Empty Queue** i hovedvinduet for Scan Control.

### Trin 7. Scan glassene

1 Klik på **Close Door** i hovedvinduet for Scan Control, hvis det er nødvendigt.

Vent, indtil døren lukkes, og knappen **Start Scan** er aktiveret.

2 I hovedvinduet for Scan Control skal du klikke på **Start Scan** for at begynde scanning af glas, der blev føjet til køen.

### Trin 8. Fjern glassene

1 I hovedvinduet for Scan Control skal du klikke på **Open Door** for at åbne scannerens dør.

2 Åbn scannerens dør og fjern glasholderne fra kassetten.

3 Fjern glassene fra glasholderne således:

- a Hold glasholderen på siderne med Agilent-logoet opad.
- b Skub forsigtigt ind, og træk op i enden med tappen på det klare plastdæksel for at åbne det.
- c Skub op på stregkodeenden af glasset fra under glasholderen for at undgå fingeraftryk på prøveområdet.
- d Grib fat om glassets sider, og fjern det fra glasholderen.

## Les instructions de base pour l'utilisation

### Pictogrammes de sécurité utilisés sur le scanner



#### Pictogramme RISQUE DE PINCEMENT

Ce pictogramme est placé sur le produit lorsqu'il existe un risque de pincement des mains ou des doigts. Gardez les mains éloignées des pièces mobiles opérant dans cette zone.

### Consignes de sécurité

De par sa conception, le scanner SureScan Dx permet une utilisation facile et sûre. Avant d'utiliser le scanner SureScan Dx, assurez-vous d'avoir bien compris et de respecter toutes les précautions désignées par les mentions AVERTISSEMENT et ATTENTION.



#### AVERTISSEMENT

**N'essayez pas d'accéder aux composants internes du scanner SureScan Dx ni de réparer ces composants. Vous risqueriez de vous exposer à des hautes tensions ou à des rayonnements laser nocifs. L'ouverture du capot annule la garantie.**



#### AVERTISSEMENT

**Branchez le scanner SureScan Dx sur une prise de courant mise à la terre. Sa sécurisation nécessite une terre de protection.**



#### ATTENTION

Afin de minimiser les vibrations dues à la numérisation rapide via l'excitation par laser sur la puce à ADN, installez le scanner sur une table ou un établi solide. N'installez pas le scanner à proximité d'autres équipements de laboratoire pouvant générer des vibrations.



#### ATTENTION

Le scanner SureScan Dx est sensible à l'humidité, lorsqu'elle atteint le point de condensation. Respectez les prescriptions de la documentation produit. Voir la section «Conditions d'humidité» à la page 179.

## Conditions d'humidité

Le scanner SureScan Dx est sensible à l'humidité, lorsqu'elle atteint le point de condensation. Respectez toujours un temps de stabilisation thermique sur site de 12 heures avant d'ouvrir l'emballage.

Pour des performances optimales, n'utilisez le scanner SureScan Dx que dans la plage d'humidité ci-après.

En fonctionnement : 15 à 85 % HR à 30 °C

## Instructions de fonctionnement

### Etape 1. Mise sous tension du scanner de puces à ADN SureScan Dx et lancement du programme Scan Control

- 1 Mettez le scanner SureScan Dx sous tension au moyen de l'interrupteur situé à l'avant de l'appareil.
- 2 Mettez l'ordinateur sous tension et patientez jusqu'au démarrage.
- 3 Double-cliquez sur l'icône **Agilent Microarray Scan Control** pour lancer le programme Scan Control.



**Figure 36** Icône Agilent Microarray Scan Control

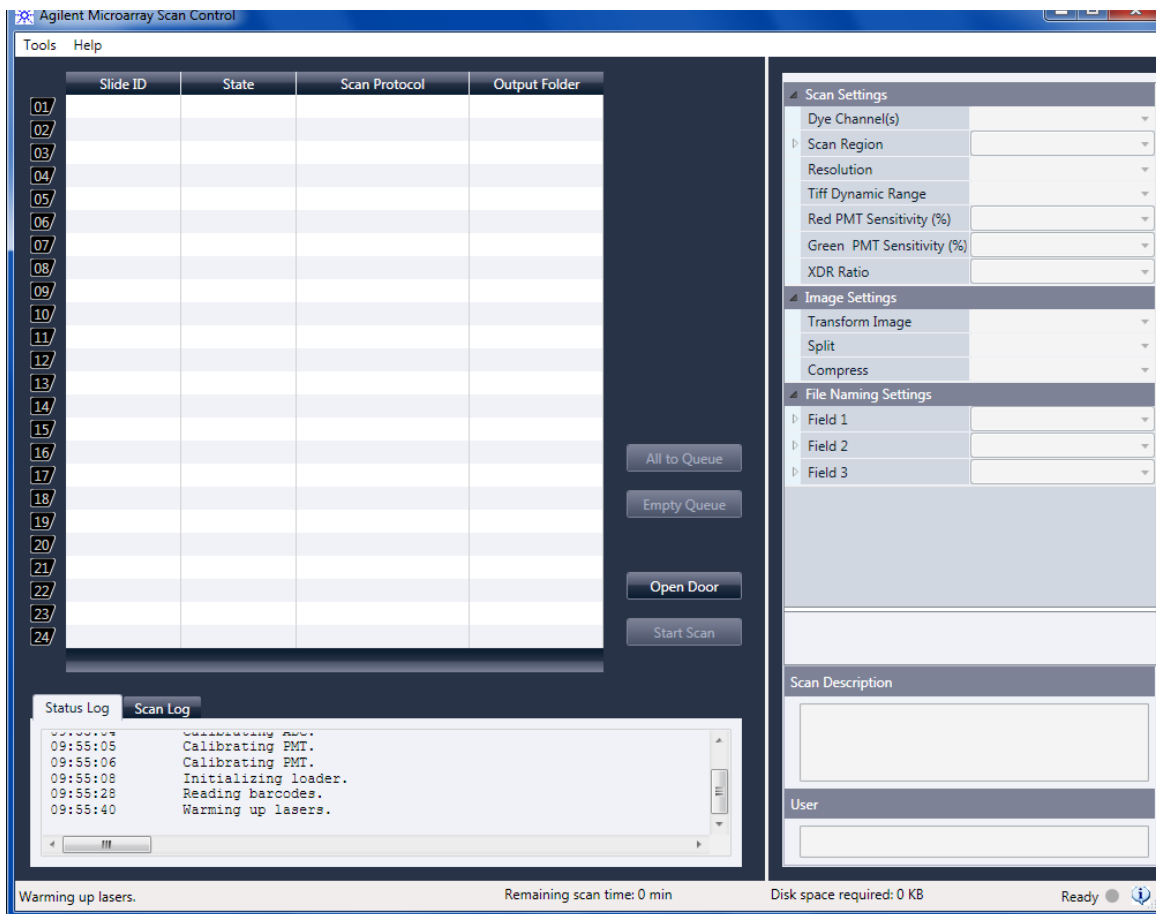
Lorsque le programme démarre, la fenêtre principale du logiciel Agilent Microarray Scan Control s'ouvre et le scanner effectue sa séquence d'initialisation. A la fin de la séquence d'initialisation, le bouton Open Door est activé ; vous pouvez alors charger des lames. Voir la section [Figure 37](#) sur la page 180.

### REMARQUE

Si 24 lames ont été chargées dans le scanner lors de sa mise sous tension, l'initialisation échoue car il ne peut pas exécuter le cycle d'éjection.

## 7 Basic Instructions for Use

### Instructions de fonctionnement



**Figure 37** Fenêtre du programme Agilent Microarray Scan Control – prêt à ajouter des lames.

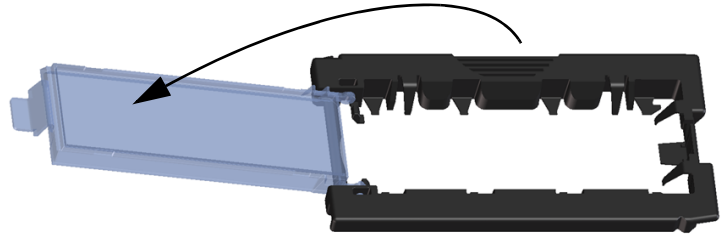
L'état du scanner est indiqué dans le coin inférieur droit de la fenêtre Scan Control, dans la barre d'état.

### Etape 2. Insertion de lames dans les porte-diapositives

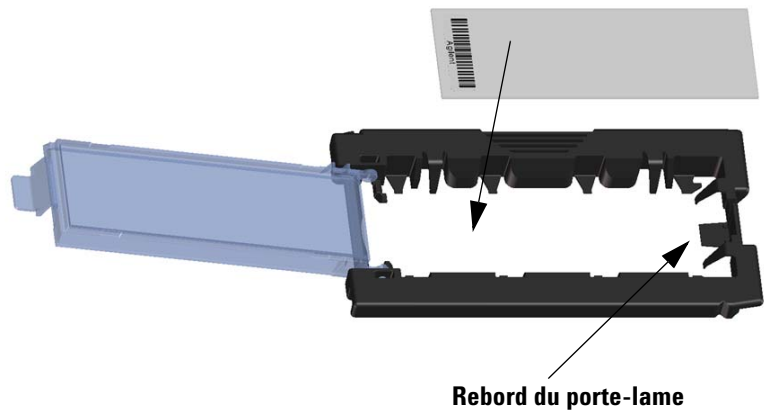
*Les traces de doigt peuvent provoquer des erreurs lors de la détection de fluorescence. Tenez les lames par les bords et portez toujours des gants lorsque vous les manipulez.*

- 1 Avant d'insérer la lame, placez le porte-lame sur une surface plane, le couvercle transparent vers le haut, et la languette à droite. Cela permet de s'assurer que vous avez aligné la lame correctement lorsque vous l'insérez dans le porte-lames.

- 2 Appuyez délicatement et tirez sur la languette du couvercle en plastique transparent pour l'ouvrir.



**Figure 38** Ouverture du porte-lame



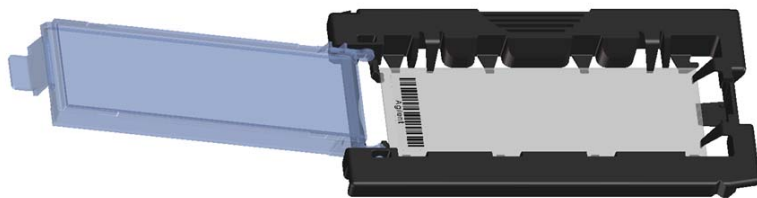
**Figure 39** Insertion de la lame dans le porte-lame

- 3 Insérez la diapositive dans le porte-diapositive, comme suit :
  - a Tenez la diapositive par l'extrémité du code-barres.
  - b Assurez-vous que la surface de la puce à ADN est orientée vers le haut, en direction du couvercle, le code-barres sur la gauche.
  - c Placez soigneusement le bord de la diapositive sans l'étiquette de code-barres contre le rebord du porte-lame. Voir la section [Figure 39](#).
  - d Abaissez doucement la diapositive dans le porte-diapositive. Voir la section [Figure 40](#).
  - e Fermez le couvercle en plastique, en poussant sur la languette jusqu'à entendre un « clic ». La diapositive se positionne dans le porte-diapositive.
  - f Appuyez délicatement et tirez sur la languette du couvercle en plastique transparent pour l'ouvrir à nouveau et vérifier que la diapositive est correctement positionnée. Une fois insérée, la diapositive est placée à plat, alignée avec les repères figurant sur le porte-diapositive.
  - g Fermez le couvercle en plastique, en poussant sur la languette jusqu'à entendre un « clic ». Voir la section [Figure 41](#).

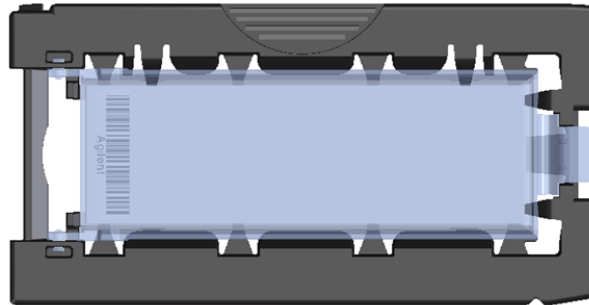


**ATTENTION**

Si la languette du couvercle en plastique est trop tendue, la mise en place de la diapositive avec un « clic » peut être compromise. Éliminez les porte-diapositives qui ne s'enclenchent plus avec un « clic » lorsque vous les fermez.



**Figure 40** Diapositive insérée dans le porte-diapositive



**Figure 41** Porte-diapositive – fermé, avec une diapositive

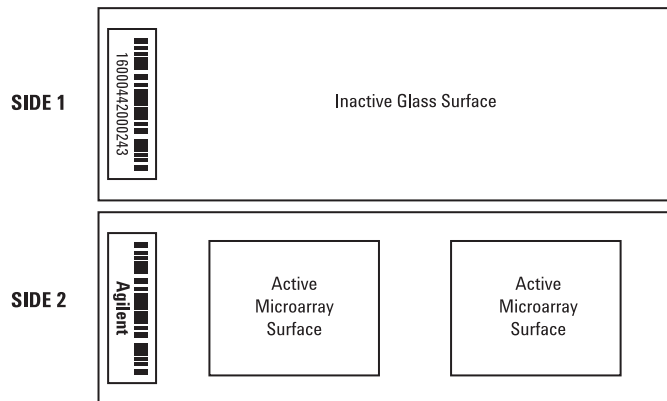
Les diapositives Agilent comportent deux codes-barres, un sur chaque face. Voir la section **Figure 42**. Dirigez toujours la face active vers le couvercle du porte-diapositive.



**ATTENTION**

Les diapositives mal insérées peuvent endommager le scanner SureScan Dx.

**Double-barcoded slide example**



**Figure 42** Orientation des diapositives

### Etape 3. Chargement des porte-diapositives dans le panier

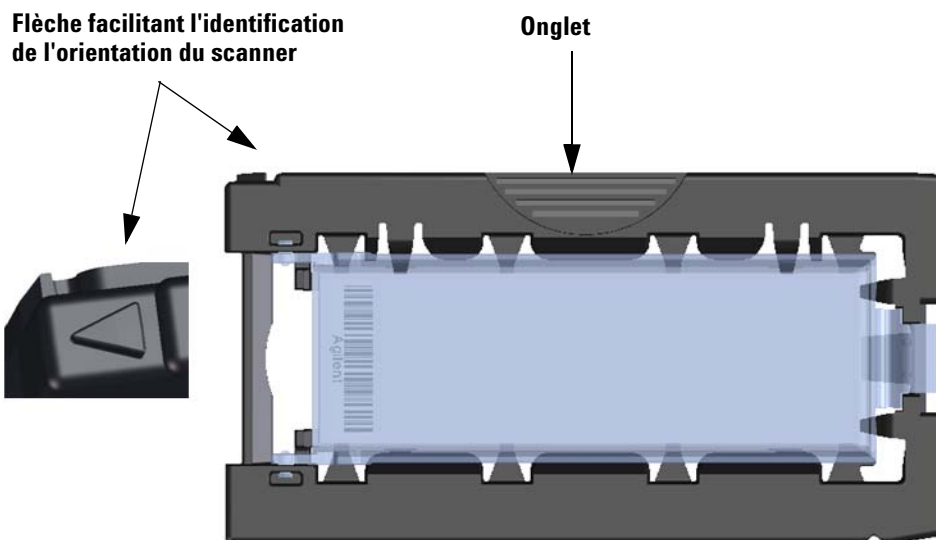
- 1 Dans la fenêtre du programme Scan Control, cliquez sur **Open Door** pour ouvrir le capot du scanner.



#### ATTENTION

Pour ouvrir correctement le capot du scanner, utilisez le bouton Open Door du programme Scan Control. N'essayez pas d'ouvrir manuellement le capot.

- 2 Saisissez le porte-diapositive en le tenant par l'onglet. La flèche au-dessus des points du porte-diapositive est orientée vers la gauche lorsque vous soulevez correctement le porte-diapositive. Voir la section [Figure 43](#).



**Figure 43** Le porte-diapositive vous aide à insérer correctement les diapositives



Insérez un porte-diapositive dans un emplacement disponible. Les numéros des emplacements sont clairement étiquetés sur le panier. N'insérez pas le porte-diapositive dans le panier avec force ; il s'insère facilement s'il est correctement aligné avec l'onglet situé sur le dessus, la flèche orientée vers la gauche.



**Figure 44** Insertion du porte-diapositive dans le panier

- 3 Assurez-vous que le porte-diapositive repose bien au fond de l'emplacement dans le panier.  
Le numéro de l'emplacement de la diapositive chargée clignote en bleu.
- 4 Répétez les étapes 2 à 3 jusqu'à ce que tous les porte-diapositives soient chargés dans le panier.



**ATTENTION**

Un mauvais positionnement du porte-diapositive dans le panier peut endommager gravement le scanner de puces à ADN SureScan Dx.

- 5 Dans le programme Scan Control, cliquez sur **Close Door**.  
Pour les diapositives n'ayant aucun protocole de numérisation associé à leur design, le protocole de numérisation reste vide et l'emplacement conserve l'état «Present». Assignez un protocole de numérisation, comme décrit à la section «[Etape 4. Définition ou modification des paramètres de numérisation](#)».

*Les paramètres actuels du protocole de numérisation sont affichés pour chaque diapositive sélectionnée dans le volet droit de la fenêtre principale du logiciel Scan Control.*

<b>AgilentHD_GX_2Color</b>	Puces d'expression de gènes à 2 couleurs haute densité Agilent
<b>AgilentHD_GX_1Color</b>	Puces d'expression de gènes à 1 couleurs haute densité Agilent
<b>AgilentG3_GX_2Color</b>	Puces G3 d'expression de gènes à 2 couleurs Agilent
<b>AgilentG3_GX_1Color</b>	Puces G3 d'expression de gènes à 1 couleur Agilent
<b>AgilentHD_CGH</b>	Puces CGH/CGH+SNP/CNV/ChIP haute densité Agilent
<b>AgilentG3_CGH</b>	Puces G3 CGH/CGH+SNP/CNV/ChIP Agilent
<b>AgilentHD_miRNA</b>	Puces miRNA haute densité Agilent
<b>AgilentG3_miRNA</b>	Puces G3 miRNA Agilent

#### Etape 4. Définition ou modification des paramètres de numérisation

La première fois que vous configurez la numérisation d'une diapositive, sélectionnez un protocole de numérisation à utiliser.

- Pour chaque diapositive du tableau des emplacements, cliquez sur le protocole de numérisation et sélectionnez un protocole à utiliser pour numériser la diapositive. Agilent fournit huit protocoles préchargés, à utiliser avec les puces à ADN haute densité (HD) Agilent et les puces à ADN G3 Agilent.

#### Etape 5. (Facultative) Modification du dossier de sortie

Vous pouvez modifier le dossier de sortie spécifié, dans lequel le programme enregistre les fichiers images créés par le scanner.

- Pour chaque diapositive dans le tableau des emplacements, cliquez sur le dossier de sortie et naviguez jusqu'à l'emplacement du dossier souhaité. Agilent vous recommande de sélectionner un dossier de sortie local sur un disque dur secondaire.

#### Etape 6. Ajout de diapositives à la file d'attente de numérisation

- 1 Dans la fenêtre principale Scan Control, cliquez sur **All to Queue** pour ajouter à la file d'attente de numérisation toutes les diapositives du tableau des emplacements affichant l'état «Ready for queue».

Une boîte de dialogue de confirmation apparaît. Cliquez sur **Yes** pour ajouter les diapositives à la file d'attente.

OU

Dans le tableau des emplacements Scan Control, cliquez sur la cellule **State** de la première diapositive à numériser, puis cliquez sur **Add to Queue**.

- 2 Pour chaque diapositive supplémentaire à numériser,
  - cliquez sur la cellule **State** et sélectionnez **Add to queue first** pour placer la diapositive en haut de la file d'attente de numérisation.

OU

- Cliquez sur la cellule **State** et sélectionnez **Add to queue last** pour placer la diapositive en bas de la file d'attente de numérisation.

Si vous devez supprimer toutes les diapositives de la file d'attente, cliquez sur **Empty Queue** dans la fenêtre principale du logiciel Scan Control.

### Etape 7. Numérisation de vos diapositives

- 1 Si nécessaire, dans la fenêtre principale du programme Scan Control, cliquez sur **Close Door**.  
Attendez la fermeture du capot et l'activation du bouton **Start Scan**.
- 2 Dans la fenêtre principale Scan Control, cliquez sur **Start Scan** pour lancer la numérisation des diapositives qui ont été ajoutées à la file d'attente.

### Etape 8. Retrait des diapositives

- 1 Dans la fenêtre principale du programme Scan Control, cliquez sur **Open Door** pour ouvrir le capot du scanner.
- 2 Ouvrez le capot du scanner et retirez le porte-diapositive du panier.
- 3 Retirez les diapositives des porte-diapositives, comme suit :
  - a Tenez le porte-diapositive par les bords, logo Agilent vers le haut.
  - b Appuyez délicatement et tirez sur la languette du couvercle en plastique transparent pour l'ouvrir.
  - c Prenez le porte-diapositive par le bas, puis poussez le côté code-barres de la diapositive vers le haut pour éviter de laisser des traces de doigts dans la zone de l'échantillon.
  - d Prenez la diapositive par les bords et sortez-la du porte-diapositive.

## Οδηγίες στα Ελληνικά

### Σύμβολα ασφαλείας στο σαρωτή



#### Σύμβολο ΚΙΝΔΥΝΟΣ ΣΥΝΘΛΙΨΗΣ

Αυτό το σύμβολο τοποθετείται στα σημεία του προϊόντος όπου υπάρχει κίνδυνος σύνθλιψης των χεριών ή των δακτύλων. Φροντίστε να κρατάτε τα χέρια σας μακριά από τα κινούμενα εξαρτήματα σε αυτά τα σημεία.

### Οδηγίες ασφαλείας

Ο σαρωτής SureScan Dx έχει σχεδιαστεί έτσι ώστε η χρήση του να είναι ασφαλής και εύκολη. Πριν αρχίσετε να χρησιμοποιείτε το σαρωτή SureScan Dx, βεβαιωθείτε ότι έχετε κατανοήσει και τηρείτε όλες τις προειδοποιήσεις και τα μέτρα προφύλαξης.



#### ΠΡΟΕΙΔΟΠΟΙΗΣΗ

Μην επιχειρήσετε να επισκευάσετε ή να αποκτήσετε πρόσβαση στα εσωτερικά εξαρτήματα του σαρωτή SureScan Dx. Υπάρχει κίνδυνος έκθεσης σε υψηλή τάση και επιβλαβή ακτινοβολία λέιζερ. Εάν αφαιρέσετε το κύριο κάλυμμα, η εγγύηση καθίσταται άκυρη.



#### ΠΡΟΕΙΔΟΠΟΙΗΣΗ

Συνδέστε το σαρωτή SureScan Dx σε μια γειωμένη πρίζα ρεύματος. Η ασφαλής χρήση του σαρωτή βασίζεται στην προστατευτική γείωση.



#### ΠΡΟΣΟΧΗ

Προκειμένου να ελαχιστοποιήσετε τους κραδασμούς που προκαλούνται από τη γρήγορη σάρωση της διέγερσης λέιζερ στη μικροστοιχία, τοποθετήστε το σαρωτή σε έναν σταθερό εργαστηριακό πάγκο ή τραπέζι. Μην τοποθετήσετε το σαρωτή κοντά σε άλλον εργαστηριακό εξοπλισμό που μπορεί να προκαλεί κραδασμούς.



#### ΠΡΟΣΟΧΗ

Ο σαρωτής SureScan Dx είναι ευαίσθητος στις συνθήκες συμπίκνωσης της υγρασίας. Πρέπει να τηρείτε τα μέτρα προφύλαξης που αναφέρονται στην τεκμηρίωση του προϊόντος. Ανατρέξτε στην ενότητα “Συνθήκες υγρασίας” στη σελίδα 189.

## Συνθήκες υγρασίας

Ο σαρωτής SureScan Dx είναι ευαίσθητος στις συνθήκες συμπύκνωσης της υγρασίας. Προτού ανοίξετε τη συσκευασία, θα πρέπει να την αφήσετε σε θερμοκρασία δωματίου για διάστημα 12 ωρών, προκειμένου να επιτευχθεί θερμική ισορροπία.

Για να διασφαλίσετε τη βέλτιστη δυνατή απόδοση, να χρησιμοποιείτε το σαρωτή SureScan Dx μόνο στο παρακάτω εύρος τιμών υγρασίας.

Λειτουργία: Σχετική υγρασία 15% έως 85% στους 30 °C

## Οδηγίες λειτουργίας

### Βήμα 1. Ενεργοποίηση σαρωτή μικροσυστοιχιών SureScan Dx και άνοιγμα προγράμματος Scan Control (Έλεγχος σάρωσης)

- 1 Ενεργοποιήστε το σαρωτή SureScan Dx χρησιμοποιώντας το διακόπτη λειτουργίας που βρίσκεται στην μπροστινή πλευρά του οργάνου.
- 2 Ενεργοποιήστε το σταθμό εργασίας και περιμένετε να ολοκληρωθεί η εκκίνησή του.
- 3 Κάντε διπλό κλικ στο εικονίδιο **Agilent Microarray Scan Control** (Έλεγχος σάρωσης μικροσυστοιχιών Agilent) για να ανοίξετε το πρόγραμμα Scan Control (Έλεγχος σάρωσης).



**Εικόνα 36** Εικονίδιο Agilent Microarray Scan Control (Έλεγχος σάρωσης μικροσυστοιχιών Agilent)

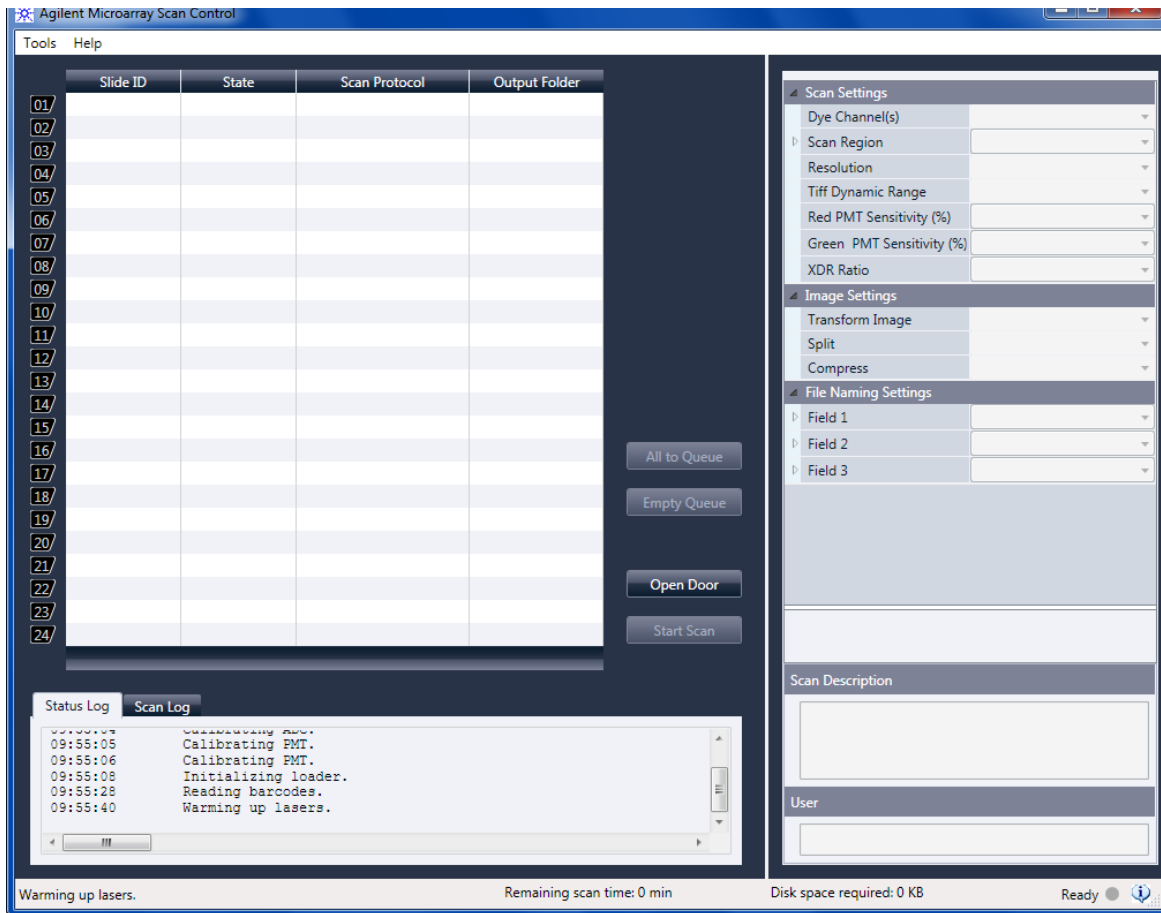
Όταν ανοίξει το πρόγραμμα, θα ανοίξει το κύριο παράθυρο του προγράμματος Agilent Microarray Scan Control (Έλεγχος σάρωσης μικροσυστοιχιών Agilent) και ο σαρωτής θα εκτελέσει την ακολουθία εκκίνησης. Αφού ολοκληρωθεί η ακολουθία εκκίνησης, θα ενεργοποιηθεί το κουμπί Open Door (Άνοιγμα θύρας), ώστε να μπορέσετε να τοποθετήσετε τα πλακίδια. Ανατρέξτε στην [Εικόνα 37](#) στη σελίδα 190.

### ΣΗΜΕΙΩΣΗ

Εάν υπάρχουν 24 πλακίδια στο σαρωτή όταν τον ενεργοποιήσετε, η εκκίνησή του θα αποτύχει, καθώς δεν θα μπορεί να εκτελέσει τον κύκλο εξαγωγής των πλακιδίων.

## 7 Basic Instructions for Use

### Οδηγίες λειτουργίας



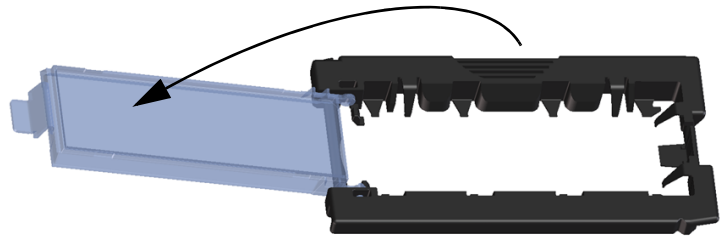
**Εικόνα 37** Παράθυρο προγράμματος Agilent Microarray Scan Control (Έλεγχος σάρωσης μικροσυστοιχιών Agilent) – Έτοιμο για τοποθέτηση πλακιδίων.

Η κατάσταση του σαρωτή υποδεικνύεται στην κάτω δεξιά γωνία του παραθύρου Scan Control (Έλεγχος σάρωσης), στη γραμμή κατάστασης.

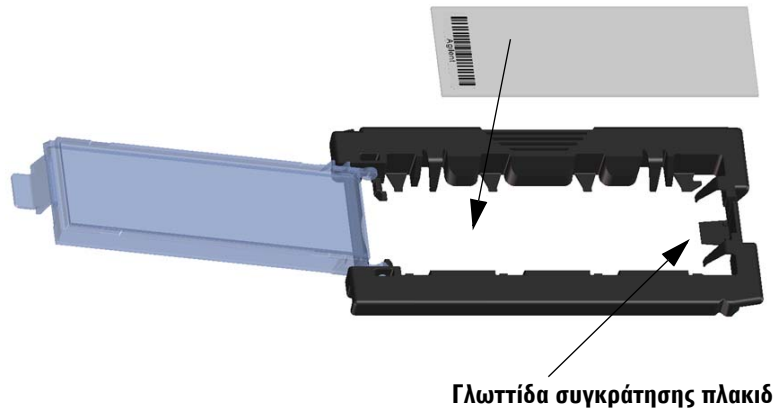
*Τα δακτυλικά αποτυπώματα προκαλούν σφάλματα κατά τη φθορισμομετρική ανίχνευση. Να κρατάτε τα πλακίδια μόνο από τα άκρα και να χρησιμοποιείτε πάντα γάντια κατά το χειρισμό τους.*

## Βήμα 2. Τοποθέτηση των πλακιδίων στις θήκες πλακιδίων

- 1 Πριν τοποθετήσετε το πλακίδιο, ακουμπήστε τη θήκη πλακιδίου σε μια επίπεδη επιφάνεια, με το διαφανές κάλυμμα προς τα επάνω και τη θήκη προς τα δεξιά. Έτσι, διασφαλίζετε ότι το πλακίδιο θα είναι σωστά ευθυγραμμισμένο κατά την τοποθέτησή του στη θήκη.
- 2 Σπρώξτε προς τα μέσα και τραβήξτε προς τα επάνω με προσοχή το άκρο του διάφανου πλαστικού καλύμματος με την προεξοχή για να το ανοίξετε.



Εικόνα 38 Άνοιγμα της θήκης πλακιδίου



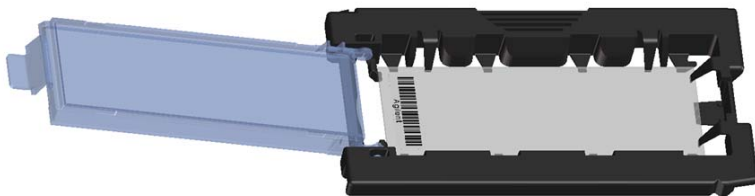
Εικόνα 39 Τοποθέτηση πλακιδίου στη θήκη πλακιδίου

- 3 Τοποθετήστε το πλακίδιο στη θήκη, ως εξής:
- a Κρατήστε το πλακίδιο από την πλευρά που υπάρχει ο γραμμικός κώδικας.
  - b Βεβαιωθείτε ότι η ενεργή επιφάνεια της μικροουστοιχίας είναι στραμμένη προς τα επάνω, προς το κάλυμμα του πλακιδίου, και ο γραμμικός κώδικας βρίσκεται στην αριστερή πλευρά.
  - c Τοποθετήστε προσεκτικά το άκρο του πλακιδίου που δεν φέρει ευκρέτα γραμμικού κώδικα στη γλωτίδα συγκράτησης πλακιδίου. Ανατρέξτε στην [Εικόνα 39](#).
  - d Τοποθετήστε προσεκτικά το πλακίδιο στη θήκη πλακιδίου. Ανατρέξτε στην [Εικόνα 40](#).
  - e Κλείστε το πλαστικό κάλυμμα του πλακιδίου πιέζοντας το άκρο με την προεξοχή μέχρι να ακούσετε το χαρακτηριστικό ήχο "κλικ". Αυτό σημαίνει ότι το πλακίδιο έχει μπει στη θέση του μέσα στη θήκη.
  - f Σπρώξτε προς τα μέσα και τραβήξτε προς τα επάνω προσεκτικά το άκρο του διάφανου πλαστικού καλύμματος με την προεξοχή για να το ανοίξετε ξανά και να επιβεβαιώσετε ότι το πλακίδιο έχει τοποθετηθεί σωστά.  
Όταν το πλακίδιο είναι σωστά τοποθετημένο, είναι σε επίπεδη θέση και υπάρχει αντιστοιχία με τα σημεία ευθυγράμμισης της θήκης πλακιδίου.
  - g Κλείστε το πλαστικό κάλυμμα του πλακιδίου πιέζοντας το άκρο με την προεξοχή μέχρι να ακούσετε το χαρακτηριστικό ήχο "κλικ". Ανατρέξτε στην [Εικόνα 41](#).



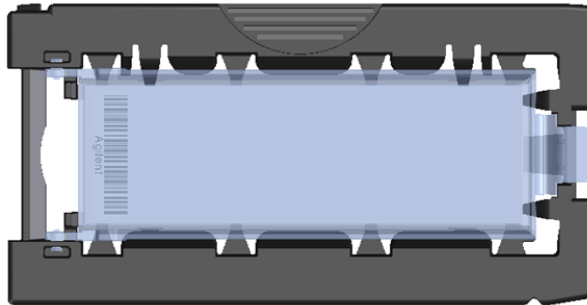
**ΠΡΟΣΟΧΗ**

Εάν η προεξοχή του πλαστικού καλύμματος πλακιδίου είναι υπερβολικά χαλαρωμένη, μπορεί να μην κλείσει σωστά. Όταν η θήκη πλακιδίου δεν κάνει πλέον "κλικ" κατά το κλείσιμό της, πρέπει να την πετάξετε.



**Εικόνα 40** Πλακίδιο τοποθετημένο στη θήκη πλακιδίου





**Εικόνα 41** Θήκη πλακιδίου – κλειστή με τοποθετημένο πλακίδιο

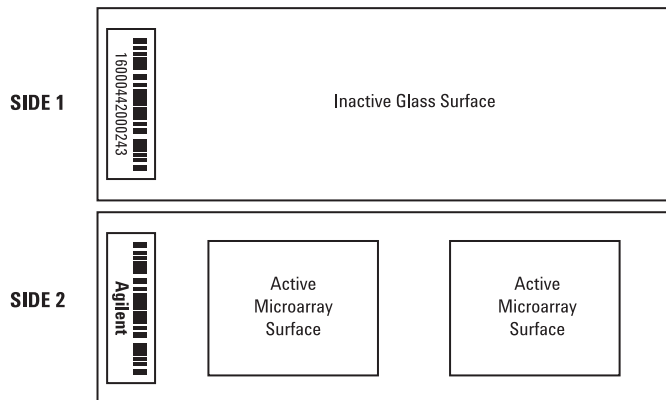
Τα πλακίδια Agilent έχουν δύο γραμμικούς κώδικες, έναν σε κάθε πλευρά της γυάλινης επιφάνειας. Ανατρέξτε στη [Εικόνα 42](#). Τοποθετήστε το πλακίδιο έτσι ώστε η ενεργή πλευρά της μικροσυστοιχίας να είναι στραμμένη προς το κάλυμμα της θήκης πλακιδίου.



**ΠΡΟΣΟΧΗ**

Εάν το πλακίδιο δεν τοποθετηθεί σωστά, μπορεί να προκληθεί βλάβη στο σαρωτή SureScan Dx.

**Double-barcoded slide example**



**Εικόνα 42** Προσανατολισμός πλακιδίου

### Βήμα 3. Τοποθέτηση των θηκών πλακιδίων στην κασέτα

- 1 Στο παράθυρο του προγράμματος Scan Control (Έλεγχος σάρωσης), επιλέξτε **Open Door** (Άνοιγμα θύρας) για να ανοίξετε τη θύρα του σαρωτή.



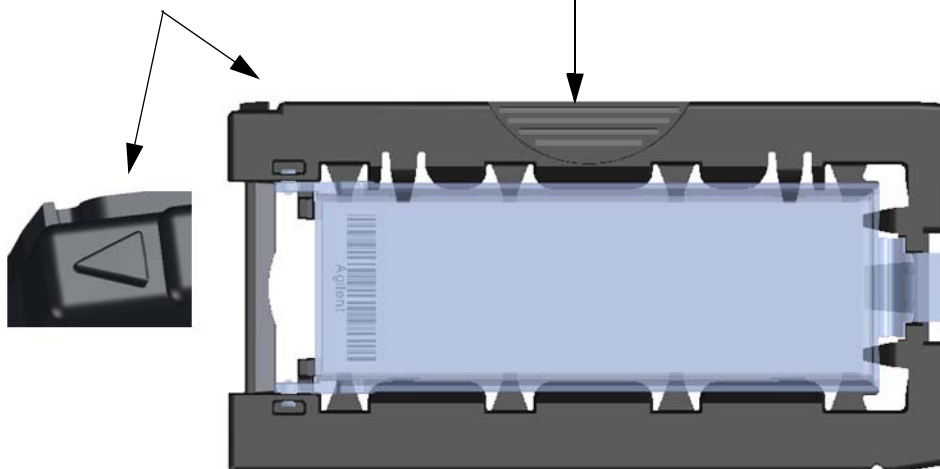
#### ΠΡΟΣΟΧΗ

Ο σωστός τρόπος για να ανοίξετε τη θύρα του σαρωτή είναι να χρησιμοποιήσετε το κουμπί Open Door (Άνοιγμα θύρας) του προγράμματος Scan Control (Έλεγχος σάρωσης). Μην επιχειρήσετε να ανοίξετε τη θύρα χειροκίνητα.

- 2 Πιάστε τη θήκη πλακιδίων χρησιμοποιώντας τη λαβή. Όταν έχετε πιάσει σωστά τη θήκη πλακιδίων, το βέλος που υπάρχει στην επάνω πλευρά της δείχνει προς τα αριστερά. Ανατρέξτε στην [Εικόνα 43](#).

Το βέλος σας βοηθά να προσδιορίσετε τον προσανατολισμό του σαρωτή

Λαβή



**Εικόνα 43** Η θήκη πλακιδίων σας βοηθά να τοποθετήσετε τα πλακίδια σωστά

Τοποθετήστε μια θήκη πλακιδίων σε μια ελεύθερη υποδοχή. Οι αριθμοί των υποδοχών αναγράφονται σαφώς στην κασέτα πλακιδίων. Μην ασκήσετε πίεση για να τοποθετήσετε τη θήκη πλακιδίου στην κασέτα. Εάν η θήκη είναι σωστά ευθυγραμμισμένη, με τη λαβή στην επάνω πλευρά και το βέλος να δείχνει προς τα αριστερά, θα τοποθετηθεί εύκολα.



**Εικόνα 44** Τοποθέτηση θήκης πλακιδίου στην κασέτα

- 3 Βεβαιωθείτε ότι η θήκη πλακιδίου έχει εφαρμόσει σωστά στην κάτω πλευρά της υποδοχής της κασέτας.  
Ο αριθμός της υποδοχής στην οποία έχει τοποθετηθεί το πλακίδιο αναβοσβήνει με μπλε χρώμα.
- 4 Επαναλάβετε τα βήματα 2 και 3 έως ότου τοποθετήσετε όλες τις θήκες πλακιδίων στην κασέτα.



**ΠΡΟΣΟΧΝ**

Εάν η θήκη πλακιδίου δεν τοποθετηθεί σωστά στην κασέτα μπορεί να προκληθεί σοβαρή βλάβη στο σαρωτή μικροσυτοιχιών SureScan Dx.

- 5 Στο πρόγραμμα Scan Control (Έλεγχος σάρωσης), επιλέξτε **Close Door** (Κλείσιμο θύρας).

Για τα πλακίδια των οποίων η σχεδίαση δεν έχει αντιστοιχιστεί με κάποιο πρωτόκολλο σάρωσης, το πρωτόκολλο σάρωσης παραμένει κενό και η κατάσταση της υποδοχής παραμένει Present (Πλήρης). Αντιστοιχίστε ένα πρωτόκολλο σάρωσης, όπως περιγράφεται στο **“Βήμα 4. Ορισμός ή αλλαγή ρυθμίσεων πρωτοκόλλου σάρωσης”**.

*Οι τρέχουσες ρυθμίσεις πρωτοκόλλου σάρωσης εμφανίζονται για κάθε επιλεγμένο πλακίδιο στο δεξί τμήμα παραθύρου του κύριου παραθύρου του λογισμικού Scan Control (Έλεγχος σάρωσης).*

<b>AgilentHD_GX_2Color</b>	Μικροουστοιχίες γονιδιακής έκφρασης 2 χρωμάτων υψηλής πυκνότητας Agilent
<b>AgilentHD_GX_1Color</b>	Μικροουστοιχίες γονιδιακής έκφρασης 1 χρώματος υψηλής πυκνότητας Agilent
<b>AgilentG3_GX_2Color</b>	Μικροουστοιχίες γονιδιακής έκφρασης 2 χρωμάτων G3 Agilent
<b>AgilentG3_GX_1Color</b>	Μικροουστοιχίες γονιδιακής έκφρασης 1 χρώματος G3 Agilent
<b>AgilentHD_CGH</b>	Μικροουστοιχίες CGH/CGH+SNP/CNV/ChIP υψηλής πυκνότητας Agilent
<b>AgilentG3_CGH</b>	Μικροουστοιχίες CGH/CGH+SNP/CNV/ChIP G3 Agilent
<b>AgilentHD_miRNA</b>	Μικροουστοιχίες miRNA υψηλής πυκνότητας Agilent
<b>AgilentG3_miRNA</b>	Μικροουστοιχίες miRNA G3 Agilent

#### Βήμα 4. Ορισμός ή αλλαγή ρυθμίσεων πρωτοκόλλου σάρωσης

Την πρώτη φορά που ετοιμάζετε να σαρώσετε ένα πλακίδιο, πρέπει να επιλέξετε ένα πρωτόκολλο σάρωσης.

- Για κάθε πλακίδιο που αναφέρεται στον πίνακα υποδοχών, επιλέξτε Scan Protocol (Πρωτόκολλο σάρωσης) και έπειτα επιλέξτε ένα πρωτόκολλο σάρωσης που θα χρησιμοποιηθεί για τη σάρωση του πλακιδίου.

Η Agilent παρέχει οκτώ προφορτωμένα πρωτόκολλα που μπορείτε να επιλέξετε και να χρησιμοποιήσετε με τις μικροουστοιχίες υψηλής πυκνότητας (HD) και τις μικροουστοιχίες G3 της Agilent.

#### Βήμα 5. (Προαιρετικό) Αλλαγή φακέλου εξόδου

Μπορείτε να αλλάξετε τον καθορισμένο φάκελο εξόδου, όπου το πρόγραμμα αποθηκεύει τα αρχεία εικόνας που έχει δημιουργήσει ο σαρωτής.

- Για κάθε πλακίδιο του πίνακα υποδοχών, επιλέξτε Output Folder (Φάκελος εξόδου) και μεταβείτε στη θέση που βρίσκεται ο φάκελος που θέλετε.

Η Agilent συνιστά να επιλέξετε έναν τοπικό φάκελο σε μια δευτερεύουσα μονάδα σκληρού δίσκου.

#### Βήμα 6. Προσθήκη πλακιδίων στην ουρά σάρωσης

1 Στο κύριο παράθυρο Scan Control (Έλεγχος σάρωσης), επιλέξτε **All to Queue** (Όλα στην ουρά) για να προσθέσετε στην ουρά σάρωσης όλα τα πλακίδια του πίνακα υποδοχών με κατάσταση Ready for queue (Έτοιμο για την ουρά).

Θα εμφανιστεί ένα παράθυρο διαλόγου επιβεβαίωσης. Επιλέξτε **Yes** (Ναι) για να προσθέσετε τα πλακίδια στην ουρά.

Ή

Στον πίνακα υποδοχών του προγράμματος Scan Control (Έλεγχος σάρωσης), κάντε κλικ στο κελί **State** (Κατάσταση) για το πρώτο πλακίδιο προς σάρωση και επιλέξτε **Add to Queue** (Προσθήκη στην ουρά).

- 2 Για κάθε επιπρόσθετο πλακίδιο που θέλετε να σαρώσετε:
  - Κάντε κλικ στο κελί **State** (Κατάσταση) και επιλέξτε **Add to queue first** (Προσθήκη στην αρχή της ουράς) για να προσθέσετε το αντίστοιχο πλακίδιο στην αρχή της ουράς σάρωσης.

Ή

- Κάντε κλικ στο κελί **State** (Κατάσταση) και επιλέξτε **Add to queue last** (Προσθήκη στο τέλος της ουράς) για να προσθέσετε το αντίστοιχο πλακίδιο στο τέλος της ουράς σάρωσης.

Εάν θέλετε να διαγράψετε όλα τα πλακίδια από την ουρά, επιλέξτε **Empty Queue** (Άδεια ουράς) στο κύριο παράθυρο του προγράμματος Scan Control (Έλεγχος σάρωσης).

### Βήμα 7. Σάρωση πλακιδίων

- 1 Εάν είναι απαραίτητο, επιλέξτε **Close Door** (Κλείσιμο θύρας) στο κύριο παράθυρο του προγράμματος Scan Control (Έλεγχος σάρωσης).  
Περιμένετε μέχρι να κλείσει η θύρα και να ενεργοποιηθεί το κουμπί **Start Scan** (Έναρξη σάρωσης).
- 2 Στο κύριο παράθυρο του προγράμματος Scan Control (Έλεγχος σάρωσης), επιλέξτε **Start Scan** (Έναρξη σάρωσης) για να ξεκινήσει η σάρωση των πλακιδίων που έχετε προσθέσει στην ουρά.

### Βήμα 8. Αφαίρεση πλακιδίων

- 1 Στο κύριο παράθυρο του προγράμματος Scan Control (Έλεγχος σάρωσης), επιλέξτε **Open Door** (Άνοιγμα θύρας) για να ανοίξετε τη θύρα του σαρωτή.
- 2 Ανοίξτε τη θύρα του σαρωτή και αφαιρέστε τις θήκες πλακιδίων από την κασέτα.
- 3 Αφαιρέστε τα πλακίδια από τις θήκες πλακιδίων, ως εξής:
  - a Κρατήστε τη θήκη πλακιδίου από τις πλαϊνές πλευρές, με το λογότυπο της Agilent στραμμένο προς τα επάνω.
  - b Σπρώξτε προς τα μέσα και τραβήξτε προς τα επάνω με προσοχή το άκρο του διάφανου πλαστικού καλύμματος με την προεξοχή για να το ανοίξετε.
  - c Σπρώξτε προς τα επάνω το άκρο του πλακιδίου με το γραμμικό κώδικα, βάζοντας το δάχτυλό σας στην κάτω πλευρά της θήκης πλακιδίου, για να μην αφήσετε δακτυλικά αποτυπώματα στην περιοχή του δείγματος.
  - d Πιάστε το πλακίδιο από τις πλαϊνές πλευρές και αφαιρέστε το από τη θήκη πλακιδίου.

## Grundlegende Hinweise für den Einsatz

### Sicherheitssymbole auf dem Scanner



#### QUETSCHGEFAHR

Das Produkt ist mit diesem Symbol gekennzeichnet, wenn die Gefahr besteht, sich Hände oder Finger zu quetschen. Achten Sie darauf, dass Sie bewegliche Teile in diesem Bereich nicht berühren.

### Sicherheitsrichtlinien

Der SureScan Dx-Scanner ist auf Sicherheit und Benutzerfreundlichkeit ausgerichtet. Lesen und beachten Sie vor der Inbetriebnahme des SureScan Dx-Scanners alle Warnungen und Hinweise.



#### WARNUNG

Versuchen Sie nicht, die internen Teile des SureScan Dx-Scanners zu reparieren oder auf diese zuzugreifen. Andernfalls setzen Sie sich selbst Hochspannung und gefährlicher Laserstrahlung aus. Das Entfernen der Hauptabdeckung führt dazu, dass die Garantie ungültig wird.



#### WARNUNG

Schließen Sie den SureScan Dx-Scanner an eine geerdete Steckdose an. Eine Schutzerdung ist für die Sicherheit erforderlich.



#### VORSICHT

Stellen Sie den Scanner auf einen stabilen Labortisch, um die Vibration am Microarray zu minimieren, die durch schnelles Scannen der Laseranregung ausgelöst wird. Stellen Sie den Scanner nicht in der Nähe von Laborausrüstung auf, die Vibrationen erzeugt.



#### VORSICHT

Der SureScan Dx-Scanner reagiert empfindlich auf kondensierende Luftfeuchtigkeit. Befolgen Sie die in der Produktdokumentation genannten Sicherheitsvorkehrungen. Siehe [„Luftfeuchtigkeitsbedingungen“](#) auf Seite 199.

## Luftfeuchtigkeitsbedingungen

Der SureScan Dx-Scanner reagiert empfindlich auf kondensierende Luftfeuchtigkeit. Vor dem Öffnen der Verpackung ist eine 12-stündige Temperaturanpassung vor Ort erforderlich.

Um eine optimale SureScan Dx-Scannerleistung sicherzustellen, nehmen Sie den Scanner nur in Betrieb, wenn der angegebene Luftfeuchtigkeitsbereich eingehalten werden kann.

Betrieb: 15% bis 85% relative Luftfeuchtigkeit bei 30 °C.

## Bedienungsanweisungen

### Schritt 1. Einschalten des SureScan Dx-Microarray-Scanners und Starten des Scan-Steuerungsprogramms

- 1 Schalten Sie den SureScan Dx-Scanner über den Ein-/Aus-Schalter an der Vorderseite des Geräts ein.
- 2 Schalten Sie die Computer-Arbeitsstation ein und warten Sie, bis sie hochgefahren ist.
- 3 Doppelklicken Sie auf das Symbol **Agilent Microarray Scan Control**, um das Scan-Steuerungsprogramm zu starten.



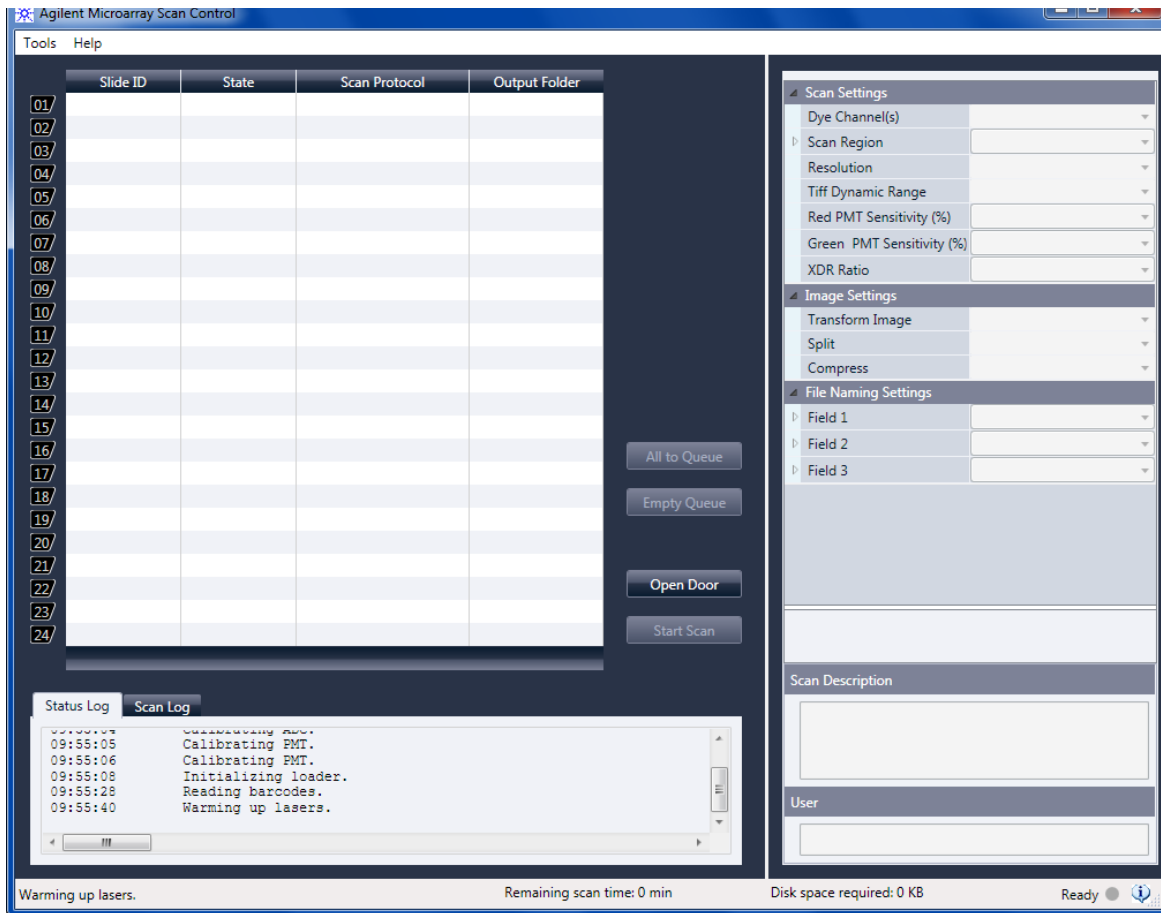
**Abbildung 36** „Agilent Microarray Scan Control“ Symbol

Beim Programmstart wird das Hauptfenster des Agilent Agilent Microarray-Scan-Steuerungsprogramms geöffnet und der Scanner führt seine Initialisierungssequenz aus. Nach der Initialisierungssequenz wird die Schaltfläche „Open Door“ aktiviert und Sie können Objektträger laden. Siehe [Abbildung 37](#) auf Seite 200.

### HINWEIS

Wenn der Scanner beim Einschalten 24 Objektträger geladen hat, misslingt die Initialisierung, weil er den Objektträger-Auswurfzyklus nicht ausführen kann.

## 7 Basic Instructions for Use Bedienungsanweisungen



**Abbildung 37** Fenster des Agilent Microarray-Scan-Steuersprogramms – bereit zum Hinzufügen von Objektträgern.

Der Status des Scanners wird in der unteren rechten Ecke des Scan-Steuersfensters in der Statusleiste angezeigt.



*Fingerabdrücke führen zu Fehlern bei der Fluoreszenzdetektion. Fassen Sie die Objektträger nur an den Kanten an und arbeiten Sie bei der Handhabung der Objektträger immer mit Handschuhen.*

## Schritt 2. Einlegen der Objektträger in die Halter

- 1 Legen Sie den Objektträger vor Einsetzen in den Halter auf eine flache Oberfläche, wobei die klare Abdeckung nach oben und die Nase nach rechts weist. So können Sie leichter sicherstellen, dass Sie den Objektträger richtig ausgerichtet haben, wenn Sie ihn in den Halter einsetzen.
- 2 Drücken Sie das mit der Nase versehene Ende der klaren Kunststoffabdeckung sanft nach unten und ziehen Sie es zum Öffnen nach oben.

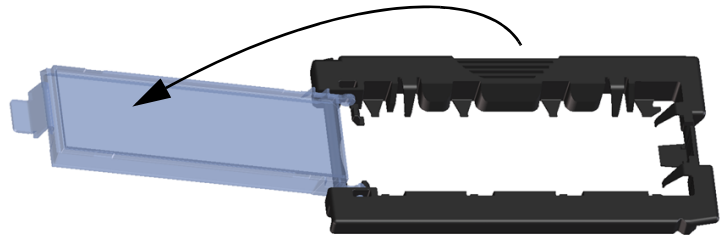


Abbildung 38 Öffnen des Objektträgerhalters

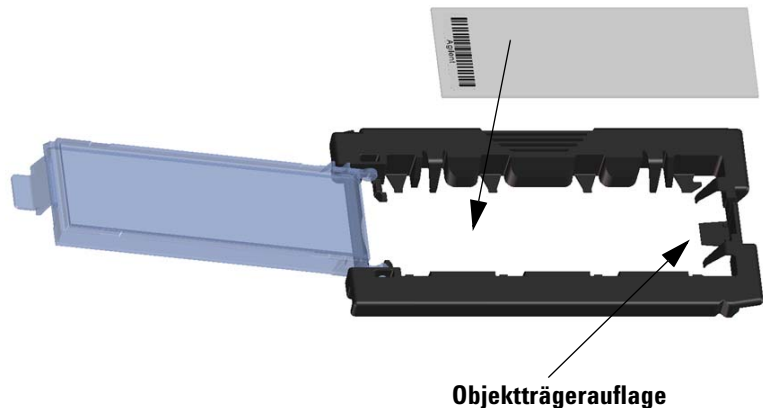


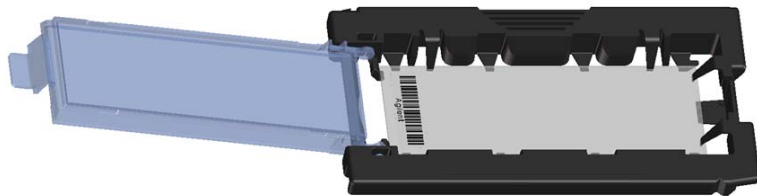
Abbildung 39 Einlegen des Objektträgers in den Objektträgerhalter

- 3 Legen Sie den Objektträger wie folgt in den Objektträgerhalter:
  - a Halten Sie den Objektträger am Strichcodeende.
  - b Achten Sie darauf, dass die aktive Microarray-Oberfläche nach oben gerichtet ist, gegen die Objektträgerabdeckung, und der Strichcode sich an der linken Seite befindet.
  - c Platzieren Sie das Ende des Objektträgers, an dem sich der Strichcode nicht befindet, vorsichtig auf der Objektträgerauflage. Siehe [Abbildung 39](#).
  - d Senken Sie den Objektträger behutsam in den Objektträgerhalter ab. Siehe [Abbildung 40](#).
  - e Schließen Sie die Objektträgerabdeckung aus Kunststoff, wobei Sie auf das Ende mit der Nase drücken, bis Sie ein Klicken hören. So wird der Objektträger im Halter in die richtige Position gebracht.
  - f Drücken Sie das mit der Nase versehene Ende der klaren Kunststoffabdeckung sanft nach unten, ziehen Sie es zum erneuten Öffnen nach oben und überzeugen Sie sich von der richtigen Positionierung des Objektträgers.  
Nach dem Einsetzen liegt der Objektträger plan und den Ausrichtungspunkten am Objektträgerhalter gemäß in seiner Position.
  - g Schließen Sie die Objektträgerabdeckung aus Kunststoff, wobei Sie auf das Ende mit der Nase drücken, bis Sie ein Klicken hören. Siehe [Abbildung 41](#).

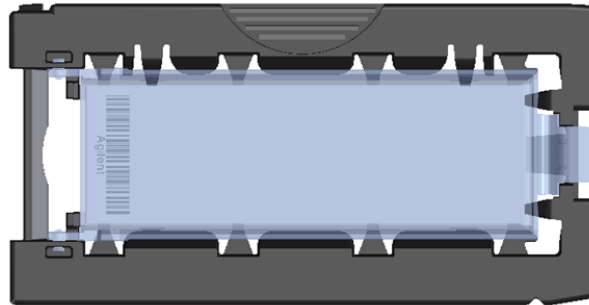


**VORSICHT**

Wenn die Nase der Kunststoff-Objektträgerabdeckung überspannt ist, rastet sie möglicherweise nicht ordnungsgemäß ein. Entsorgen Sie Objektträgerhalter, die beim Verschließen nicht mehr klicken.



**Abbildung 40** In Objektträgerhalter eingelegter Objektträger



**Abbildung 41** Objektträgerhalter – geschlossen mit Objektträger

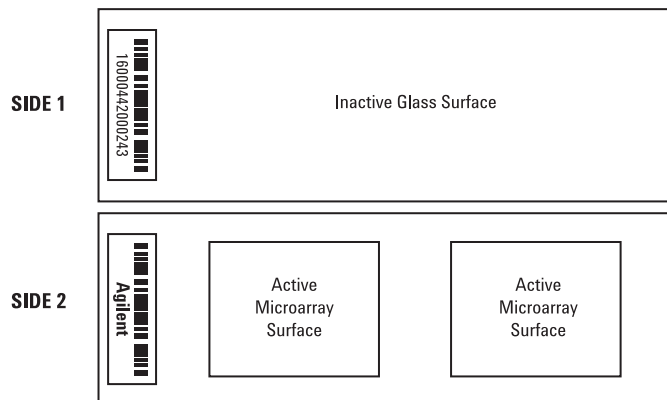
Agilent Objektträger verfügen über zwei Strichcodes, einem auf jeder Seite des Glases. Siehe [Abbildung 42](#). Platzieren Sie die Objektträgerseite mit dem aktiven Microarray so, dass sie nach oben in Richtung des Deckels des Halters zeigt.



**VORSICHT**

Ein nicht ordnungsgemäß eingelegter Objektträger kann zu Beschädigungen am SureScan Dx-Scanner führen.

**Double-barcoded slide example**



**Abbildung 42** Ausrichtung des Objektträgers

### Schritt 3. Laden des Halters in die Kasette

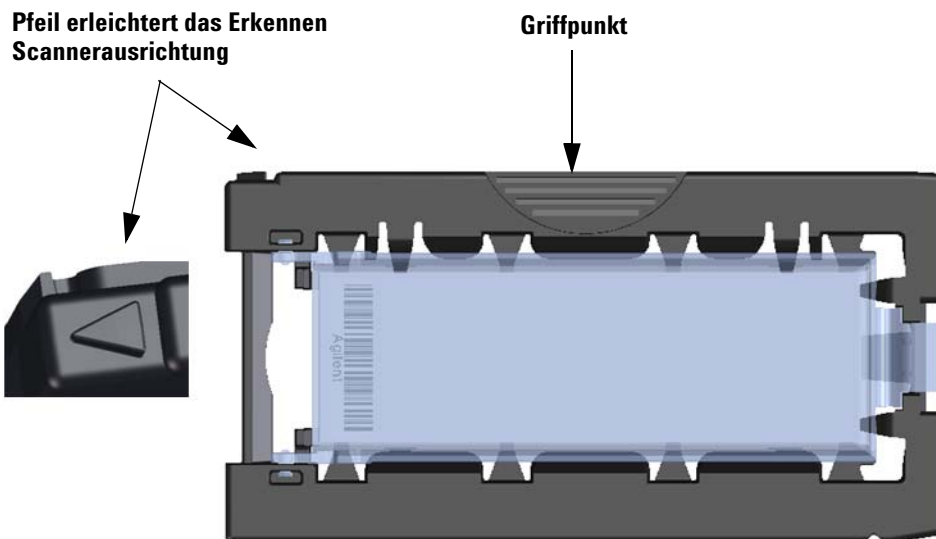
- 1 Klicken Sie im Scan-Steuerungsprogrammfenster auf **Open Door**, um die Scannertür zu öffnen.



#### VORSICHT

Die richtige Methode zum Öffnen der Scannertür ist die Verwendung der Schaltfläche „Open Door“ im Scan-Steuerungsprogramm. Versuchen Sie nicht, die Tür manuell zu öffnen.

- 2 Greifen Sie den Objektträgerhalter am Griffpunkt. Der Pfeil an der Oberseite des Objektträgerhalters weist nach links, wenn Sie den Objektträgerhalter richtig greifen. Siehe [Abbildung 43](#).



**Abbildung 43** Der Objektträgerhalter erleichtert Ihnen das richtige Einlegen des Objektträgers

Setzen Sie einen Objektträgerhalter in einen beliebigen offenen Steckplatz ein. Die Objektträgerkassette ist deutlich mit den Steckplatznummern beschriftet. Versuchen Sie nicht, den Objektträgerhalter in die Kassette zu zwingen; er lässt sich mühelos einsetzen, wenn er richtig ausgerichtet ist, d. h. wenn der Griffpunkt oben ist und der Pfeil nach links weist.



**Abbildung 44** Einsetzen des Objektträgerhalters in die Kassette

- 3 Stellen Sie sicher, dass der Halter fest am Boden des Kassettensteckplatzes sitzt.  
Die Steckplatznummer des geladenen Objektträgers blinkt blau.
- 4 Wiederholen Sie die Schritte 2 bis 3, bis alle Objektträgerhalter in die Kassette geladen sind.



**VORSICHT**

Eine unsachgemäße Platzierung des Halters in der Kassette kann zu schweren Beschädigungen am SureScan Dx-Microarray-Scanner führen.

- 5 Klicken Sie im Scan-Steuerungsprogramm auf **Close Door**.

Für Objektträger, deren Konstruktion kein Scan-Protokoll zugeordnet ist, bleibt das Scan-Protokoll leer und der Steckplatzstatus „Present“. Weisen Sie wie in „[Schritt 4. Festlegen oder Ändern von Einstellungen des Scan-Protokolls](#)“ beschrieben ein Scan-Protokoll zu.

*Die aktuellen Einstellungen des Scan-Protokolls werden für jeden ausgewählten Objektträger im rechten Feld des Hauptfensters der Scan-Steuerungssoftware angezeigt.*

<b>AgilentHD_GX_2Color</b>	Agilent HD-Genexpressions-Microarrays mit 2 Farben
<b>AgilentHD_GX_1Color</b>	Agilent HD-Genexpressions-Microarrays mit 1 Farbe
<b>AgilentG3_GX_2Color</b>	Agilent G3-Genexpressions-Microarrays mit 2 Farben
<b>AgilentG3_GX_1Color</b>	Agilent G3-Genexpressions-Microarrays mit 1 Farbe
<b>AgilentHD_CGH</b>	Agilent HD-CGH/CGH+SNP/CNV/ChIP-Microarrays
<b>AgilentG3_CGH</b>	Agilent G3-CGH/CGH+SNP/CNV/ChIP-Microarrays
<b>AgilentHD_miRNA</b>	Agilent HD-miRNA-Microarrays
<b>AgilentG3_miRNA</b>	Agilent G3-miRNA-Microarrays

#### Schritt 4. Festlegen oder Ändern von Einstellungen des Scan-Protokolls

Wenn Sie zum ersten Mal die Einrichtung zum Scannen eines Objektträgers vornehmen, wählen Sie ein zu verwendendes Scan-Protokoll.

- Klicken Sie für jeden Objektträger in der Steckplatztabelle auf das Scan-Protokoll, und wählen Sie ein Scan-Protokoll aus, das zum Scannen des Objektträgers verwendet werden soll.

Agilent liefert acht vorkonfigurierte Protokolle, die Ihnen zur Auswahl und Verwendung mit Agilent High-Density (HD)-Microarrays und Agilent G3 Microarrays zur Verfügung stehen.

#### Schritt 5. (Optional) Ändern des Ausgabeordners

Sie können den festgelegten Ausgabeordner ändern, in dem das Programm die durch den Scanner erstellten Bilddateien speichert.

- Klicken Sie für jeden Objektträger auf den Ausgabeordner und navigieren Sie zum Speicherort des gewünschten Ordners.

Agilent empfiehlt, einen lokalen Ordner auf einer zweiten Festplatte auszuwählen.

#### Schritt 6. Hinzufügen von Objektträgern zur Scan-Warteschlange

- 1 Klicken Sie im Hauptfenster des Scan-Steuerungsprogramms auf **All to Queue**, um alle Objektträger in der Steckplatztabelle mit dem Status „Ready for queue“ der Scan-Warteschlange hinzuzufügen.

Ein Bestätigungsdialogfenster wird geöffnet. Klicken Sie auf **Yes**, um die Objektträger der Warteschlange hinzuzufügen.

ODER

Klicken Sie in der Steckplatztabelle des Scan-Steuerungsprogramms für den ersten zu scannenden Objektträger auf die Zelle **State** und klicken Sie auf **Add to Queue**.

- 2 Für jeden zusätzlichen Objektträger, den Sie scannen möchten:
  - Klicken Sie auf die Zelle **State** und wählen Sie **Add to queue first**, um den Objektträger am Anfang der Scan-Warteschlange hinzuzufügen.

ODER

- Klicken Sie auf die Zelle **State** und wählen Sie **Add to queue last**, um den Objektträger am Ende der Scan-Warteschlange hinzuzufügen.

Wenn Sie alle Objektträger aus der Warteschlange entfernen müssen, klicken Sie im Hauptfenster des Scan-Steuerungsprogramms auf **Empty Queue**.

### Schritt 7. Scannen der Objektträger

- 1 Klicken Sie ggf. im Hauptfenster des Scan-Steuerungsprogramms auf **Close Door**.  
Warten Sie, bis die Tür schließt und die Schaltfläche **Start Scan** aktiviert ist.
- 2 Klicken Sie im Hauptfenster des Scan-Steuerungsprogramms auf **Start Scan**, um mit dem Scannen der Objektträger zu beginnen, die der Warteschlange hinzugefügt wurden.

### Schritt 8. Entfernen der Objektträger

- 1 Klicken Sie im Hauptfenster des Scan-Steuerungsprogramms auf **Open Door**, um die Scannertür zu öffnen.
- 2 Öffnen Sie die Scannertür und nehmen Sie die Objektträgerhalter aus der Kassette.
- 3 Nehmen Sie die Objektträger wie folgt aus den Haltern:
  - a Halten Sie den Halter für die Objektträger mit den Seiten nach oben, auf denen das Agilent Logo abgebildet ist.
  - b Drücken Sie das mit der Nase versehene Ende der klaren Kunststoffabdeckung sanft nach unten und ziehen Sie es zum Öffnen nach oben.
  - c Drücken Sie das Ende des Objektträgers mit dem Strichcode von der Unterseite des Halters nach oben, um Fingerabdrücke in dem Bereich mit der Probe zu vermeiden.
  - d Fassen Sie den Objektträger an den Seiten an und nehmen Sie ihn aus dem Halter.

## Istruzioni di base per l'uso

### Simboli di sicurezza sullo scanner



#### Simbolo **PERICOLO DI LESIONI DA COMPRESSIONE**

Questo simbolo viene posto sul prodotto dove sussiste un potenziale pericolo di compressione delle mani o delle dita. Tenere lontane le mani dai componenti in movimento in quest'area.

### Linee guida di sicurezza

Lo scanner SureScan Dx è concepito per un impiego semplice e sicuro. Assicurarsi di comprendere e osservare tutte le avvertenze e gli avvisi prima di utilizzare lo scanner SureScan Dx.



#### **AVVERTENZA**

**Non tentare di riparare o di accedere ai componenti interni dello scanner SureScan Dx. Sussiste il rischio di esporsi ad alta tensione e a radiazioni laser pericolose. La rimozione del coperchio principale rende nulla la garanzia.**



#### **AVVERTENZA**

**Collegare lo scanner SureScan Dx a una presa di alimentazione dotata di messa a terra. Per la sicurezza è necessaria una messa a terra di protezione.**



#### **ATTENZIONE**

Al fine di ridurre al minimo le vibrazioni dovute alla rapida scansione dell'eccitazione laser nel microarray, installare lo scanner su un tavolo da laboratorio o un piano robusto. Non installare lo scanner in prossimità di altre apparecchiature di laboratorio che potrebbero produrre vibrazioni.



#### **ATTENZIONE**

Lo scanner SureScan Dx è sensibile alle condizioni di umidità con generazione di condensa. Osservare le precauzioni indicate nella documentazione del prodotto. Vedere **“Condizioni di umidità”** a pagina 209.



## Condizioni di umidità

Lo scanner SureScan Dx è sensibile alle condizioni di umidità con generazione di condensa. Consentire sempre 12 ore di equilibratura termica prima di togliere lo scanner dall'imballo dopo la consegna.

Per garantire ottime prestazioni dello scanner SureScan Dx, utilizzare lo scanner rispettando gli intervalli di umidità specificati.

In funzione: da 15% a 85% umidità relativa a 30 °C

## Istruzioni d'uso

### Operazione 1. Accensione dello scanner per microarray SureScan Dx e avvio del programma Scan Control

- 1 Accendere lo scanner SureScan Dx premendo il pulsante di accensione posto sul lato anteriore dello strumento.
- 2 Accendere la postazione di lavoro e attendere l'avvio del computer.
- 3 Fare doppio clic sull'icona **Agilent Microarray Scan Control** per avviare il programma Scan Control.



**Figura 36** Icona Agilent Microarray Scan Control

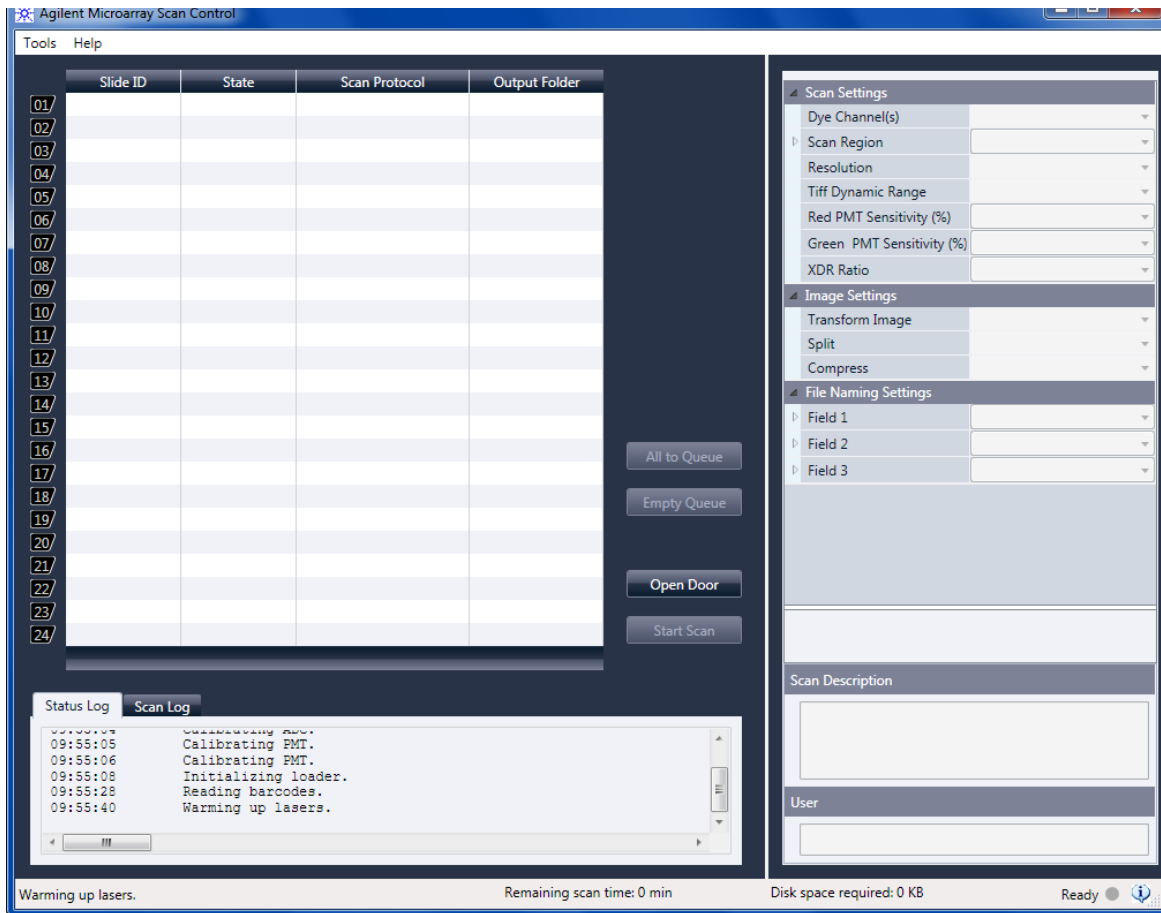
Dopo l'avvio del programma, la finestra principale di Agilent Microarray Scan Control si apre e lo scanner effettua la sequenza di inizializzazione. Al termine della sequenza di inizializzazione, si attiva il pulsante Open Door ed è possibile iniziare a caricare i vetrini. Vedere [Figura 37](#) a pagina 210.

#### NOTA

Se all'accensione sono presenti nello scanner 24 vetrini caricati, l'inizializzazione non andrà a buon fine perché non sarà possibile eseguire il ciclo di espulsione dei vetrini.

## 7 Basic Instructions for Use

### Istruzioni d'uso



**Figura 37** Finestra del programma Agilent Microarray Scan Control – lo scanner è pronto per l'inserimento dei vetrini.

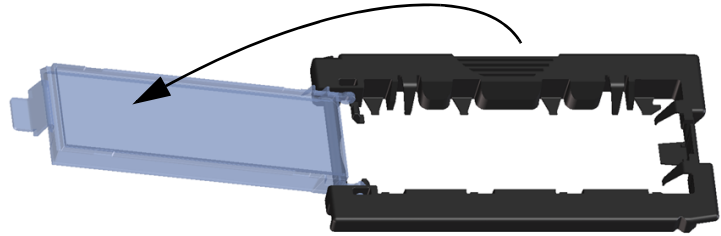
Lo stato dello scanner è indicato nell'angolo in basso a destra della finestra Scan Control, nella barra di stato.

### Operazione 2. Inserimento dei vetrini nei portavetrini

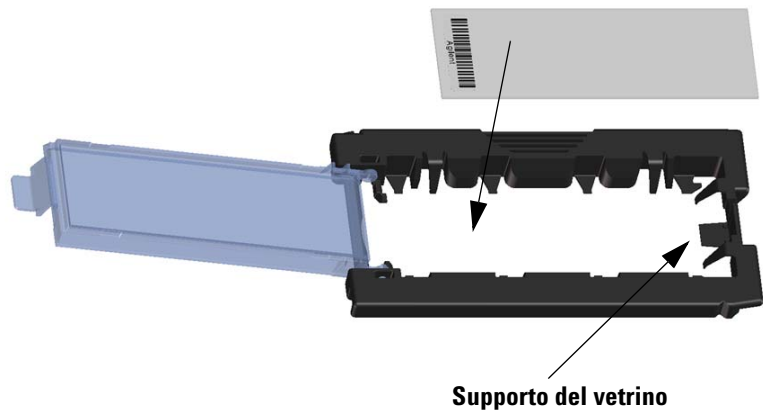
*Le impronte digitali causano errori nel rilevamento della fluorescenza. Usare sempre i guanti quando si maneggiano i vetrini, facendo attenzione a toccare solo i bordi.*

- 1 Prima di inserire un vetrino, collocare il portavetrini su una superficie piana, con il coperchio trasparente rivolto verso l'alto e la linguetta a destra. Questa accortezza serve a garantire che il vetrino sia allineato correttamente durante l'inserimento nel portavetrini.

- 2 Spingere e sollevare delicatamente la linguetta del coperchio di plastica trasparente per aprirlo.



**Figura 38** Apertura del portavetrini



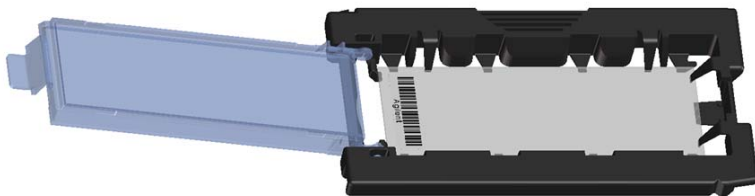
**Figura 39** Inserimento del vetrino nel portavetrini

- 3 Inserire il vetrino nel portavetrini seguendo le indicazioni sotto riportate:
  - a Mantenere il vetrino tenendolo dall'estremità del codice a barre.
  - b Verificare che la superficie attiva con il microarray sia rivolta verso l'alto, verso il coperchio, con il codice a barre a sinistra.
  - c Posizionare con cautela l'estremità del vetrino senza l'etichetta del codice a barre sul supporto del vetrino. Vedere [Figura 39](#).
  - d Abbassare delicatamente il vetrino nel portavetrini. Vedere [Figura 40](#).
  - e Chiudere il coperchio di plastica del vetrino, spingendo sull'estremità della linguetta fino a sentire un 'clic'. Questa operazione posiziona il vetrino nel portavetrini.
  - f Spingere e sollevare delicatamente la linguetta del coperchio di plastica trasparente dal bordo esterno per aprirlo nuovamente e verificare che il vetrino sia posizionato correttamente.  
Una volta inserito, il vetrino rimane piatto e allineato ai riferimenti sul portavetrini.
  - g Chiudere il coperchio di plastica del vetrino, spingendo sull'estremità della linguetta fino a sentire un 'clic'. Vedere [Figura 41](#).

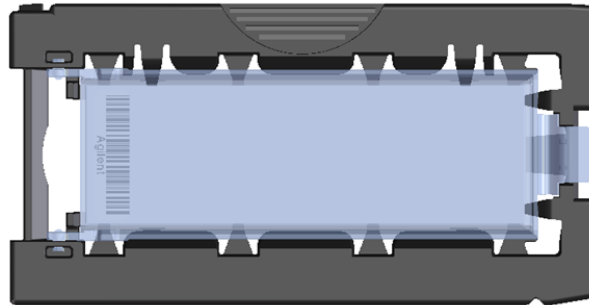


**ATTENZIONE**

Se la linguetta del coperchio di plastica del vetrino è stata tirata troppo, potrebbe non chiudersi correttamente. Nel caso in cui non si avverta il 'clic' dopo diversi tentativi, sostituire il portavetrini.



**Figura 40** Vetrino inserito nel portavetrini



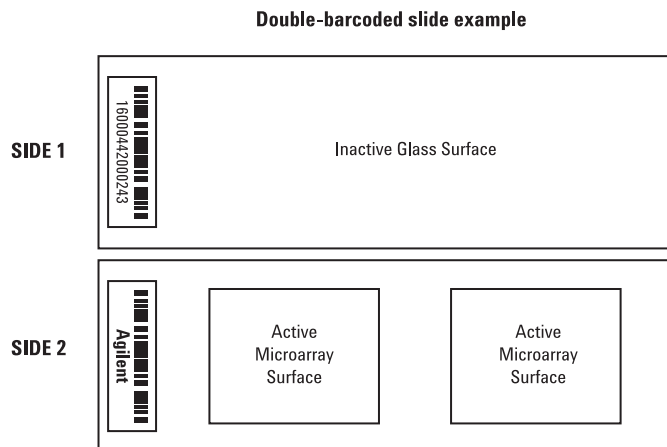
**Figura 41** Portavetrini – chiuso con vetrino

I vetrini Agilent hanno due codici a barre, uno su ciascun lato del vetro. Vedere [Figura 42](#). Posizionare il vetrino con il lato attivo, su cui è presente il microarray, rivolto verso il coperchio del portavetrini.



**ATTENZIONE**

Un vetrino inserito in maniera impropria può danneggiare lo scanner SureScan Dx.



**Figura 42** Orientamento del vetrino

### Operazione 3. Caricamento dei portavetrini nel caricatore

- 1 Nella finestra del programma Scan Control, fare clic su **Open Door** per aprire lo sportello dello scanner.



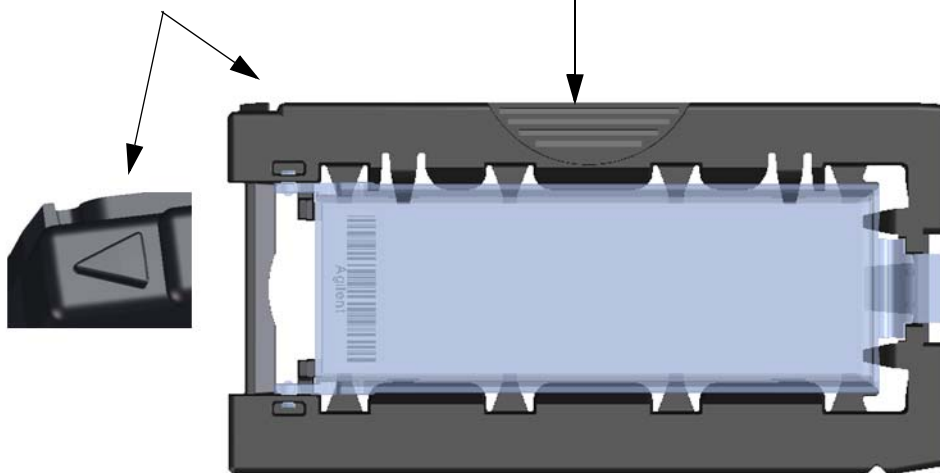
#### ATTENZIONE

Per aprire correttamente lo sportello dello scanner è necessario utilizzare il pulsante Open Door nel programma Scan Control. Non tentare di aprire lo sportello manualmente.

- 2 Sollevare il portavetrini utilizzando la maniglia. Se si solleva correttamente il portavetrini, la freccia sulla parte alta del portavetrini è rivolta verso sinistra. Vedere [Figura 43](#).

La freccia aiuta a identificare l'orientamento dello scanner

Maniglia



**Figura 43** Il portavetrini aiuta a inserire i vetrini in modo appropriato

Inserire un portavetrini in uno slot aperto. I numeri degli slot sono chiaramente marcati sul caricatore. Non forzare il portavetrini nel caricatore: il portavetrini entra facilmente nel caricatore se adeguatamente allineato con la maniglia verso l'alto e la freccia rivolta a sinistra.



**Figura 44** Inserimento del portavetrini nel caricatore

**3** Accertarsi che il portavetrini sia ben alloggiato sul fondo dello slot del caricatore.

Il numero di slot corrispondente al vetrino caricato lampeggia di colore blu.

**4** Ripetere i punti da 2 a 3 finché tutti i portavetrini non saranno caricati nel caricatore.



**ATTENZIONE**

Il posizionamento improprio del portavetrini nel caricatore può causare gravi danni allo scanner per microarray SureScan Dx.

**5** Nel programma Scan Control, fare clic su **Close Door**.

Per i vetrini che non hanno un protocollo di scansione mappato nel relativo design, il protocollo di scansione rimane vuoto e lo stato dello slot resta impostato su "Present". Attribuire un protocollo di scansione, come descritto in [“Operazione 4. Impostazione o modifica delle impostazioni del protocollo di scansione”](#).

*Le impostazioni correnti per il protocollo di scansione sono visualizzate per ciascun vetrino selezionato nel riquadro di destra della finestra principale del software Scan Control.*

<b>AgilentHD_GX_2Color</b>	Microarray di espressione genetica Agilent HD a 2 colori
<b>AgilentHD_GX_1Color</b>	Microarray di espressione genetica Agilent HD a 1 colore
<b>AgilentG3_GX_2Color</b>	Microarray di espressione genetica Agilent G3 a 2 colori
<b>AgilentG3_GX_1Color</b>	Microarray di espressione genetica Agilent G3 a 1 colore
<b>AgilentHD_CGH</b>	Microarray Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Microarray Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Microarray Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Microarray Agilent G3 miRNA

#### **Operazione 4. Impostazione o modifica delle impostazioni del protocollo di scansione**

Se si imposta la scansione di un vetrino per la prima volta, è necessario selezionare un protocollo di scansione da utilizzare.

- Per ciascun vetrino nella tabella slot, fare clic su Scan Protocol e selezionare un protocollo di scansione da utilizzare per la scansione del vetrino.

Agilent fornisce otto protocolli precaricati per la selezione e l'utilizzo con i microarray ad alta densità Agilent (HD) e i microarray Agilent G3.

#### **Operazione 5. (Opzionale) Modifica della cartella di output**

È possibile modificare la cartella di output specificata in cui il programma salva i file di immagine creati dallo scanner.

- Per ciascun vetrino nella tabella degli slot, fare clic su Output Folder e selezionare il percorso della cartella desiderata.

Agilent consiglia di selezionare una cartella locale su un disco rigido secondario.

#### **Operazione 6. Aggiunta di vetrini alla coda di scansione**

- 1 Nella finestra principale di Scan Control, fare clic su **All to Queue** per aggiungere tutti i vetrini nella tabella degli slot con stato "Ready for queue" alla coda di scansione.

Viene visualizzata una finestra di dialogo di conferma. Fare clic su **Yes** per aggiungere i vetrini alla coda.

IN ALTERNATIVA



Nella tabella degli slot Scan Control, fare clic sulla cella **State** per il primo vetrino da sottoporre a scansione, quindi fare clic su **Add to Queue**.

- 2 Per ciascun vetrino aggiuntivo da sottoporre a scansione,
  - Fare clic sulla cella **State** e selezionare **Add to queue first** per aggiungere il vetrino in cima alla coda di scansione.

IN ALTERNATIVA

- Fare clic sulla cella **State** e selezionare **Add to queue last** per aggiungere il vetrino in fondo alla coda di scansione.

Per rimuovere tutti i vetrini dalla coda, fare clic su **Empty Queue** nella finestra principale di Scan Control.

### Operazione 7. Scansione dei vetrini

- 1 Se necessario, nella finestra principale di Scan Control, fare clic su **Close Door**.

Attendere che lo sportello si richiuda; il pulsante **Start Scan** è ora attivo.

- 2 Nella finestra principale di Scan Control, fare clic su **Start Scan** per avviare la scansione dei vetrini aggiunti alla coda.

### Operazione 8. Rimozione dei vetrini

- 1 Nella finestra principale di Scan Control, fare clic su **Open Door** per aprire lo sportello dello scanner.

- 2 Aprire lo sportello dello scanner e rimuovere i portavetrini dal caricatore.

- 3 Rimuovere i vetrini dai portavetrini nel modo seguente:

- a Tenere il portavetrini per i lati con il logo Agilent rivolto verso l'alto.

- b Spingere e sollevare delicatamente la linguetta del coperchio di plastica trasparente per aprirlo.

- c Spingere sull'estremità del codice a barre del vetrino da sotto il portavetrini per evitare di lasciare impronte sull'area del campione.

- d Afferrare il vetrino dai lati e rimuoverlo dal portavetrini.

## Norādes latviešu valodā

### Drošības simboli uz skenera



#### Simbols SASPIEŠANAS RISKS

Šis simbols uz izstrādājuma redzams vietā, kur var iespiest plaukstu vai pirkstus. Netuviniet rokas šīs zonas kustīgajām daļām.

### Ieteikumi par drošību

SureScan Dx skeneris ir paredzēts drošai un vienkāršai izmantošanai. Pirms SureScan Dx skenera lietošanas pārlicinieties, vai izprotat un ievērojāt visus brīdinājumus un piesardzības pasākumus.



#### BRĪDINĀJUMS

**Nemēģiniet veikt remontu vai pieklūt SureScan Dx skenera iekšējiem komponentiem. Šādas darbības izraisa augsta sprieguma un kaitīga lāzerstarojuma iedarbības risku. Galvenā pārsega noņemšanas gadījumā tiek anulēta garantija.**



#### BRĪDINĀJUMS

**SureScan Dx skeneri pievienojiet iezemētai elektrības rozetei. Aizsargzemējums ir nepieciešams drošības nolūkos.**



#### UZMANĪBU

Lai pēc iespējas samazinātu vibrāciju, ko izraisa ātra lāzera ieroses skenēšana mikromasīvā, uzstādiet skeneri uz izturīga laboratorijas sola vai galda. Neuzstādiet skeneri cita laboratorijas aprīkojuma, kas var izraisīt vibrāciju, tuvumā.



#### UZMANĪBU

SureScan Dx skeneris ir jutīgs pret kondensācijas mitruma ietekmi. Ievērojiet piesardzības pasākumus, kas norādīti izstrādājuma dokumentācijā. Skatiet “Mitrums” lappusē 219.

## Mitrums

SureScan Dx skeneris ir jutīgs pret kondensācijas mitruma ietekmi. Pirms pārvadāšanas iepakojuma atvēršanas vienmēr nogaidiet 12 stundas termālās stabilizēšanas nolūkā.

Lai nodrošinātu optimālu veiktspēju, izmantojiet SureScan Dx skeneri tikai tālāk norādītajā mitruma diapazonā.

Darbība: 15–85% relatīvā mitruma 30 °C temperatūrā

## Darbības norādījumi

### 1. solis. Ieslēdziet SureScan Dx mikromasīva skeneri un sāciet programmu Scan Control (Skenēšanas vadība)

- 1 Ieslēdziet SureScan Dx skeneri ar barošanas slēdzi instrumenta priekšpusē.
- 2 Ieslēdziet datora darbstaciju un pagaidiet, kamēr tā tiek sāknēta.
- 3 Veiciet dubultklikšķi uz ikonas **Agilent Microarray Scan Control** (Agilent mikromasīva skenēšanas vadība), lai sāktu programmu Scan Control (Skenēšanas vadība).



#### Fattēls 36 Agilent mikromasīva skenēšanas vadības ikona

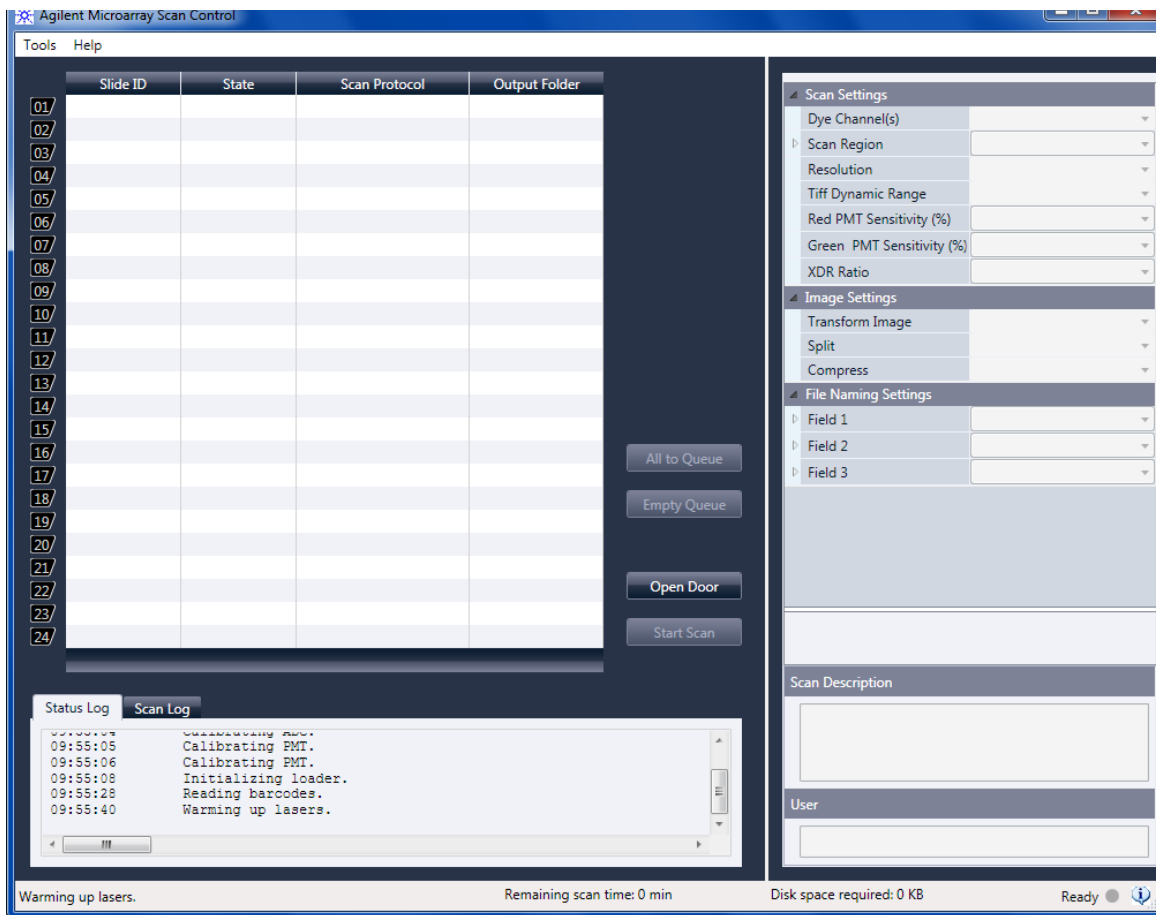
Sākot programmu, tiek atvērta programmas Agilent Microarray Scan Control (Agilent mikromasīva skenēšanas vadība) galvenais logs un skeneris izpilda inicializācijas secību. Kad inicializācijas secība ir pabeigta, tiek iespējota poga Open Door (Atvērt durvis) un jūs varat ievietot priekšmetstikļņus. Skatiet [Fattēls 37](#) lappusē 220.

#### PIEZĪME

Ja, ieslēdzot skeneri, tajā ir ievietoti 24 priekšmetstikļņi, inicializācija neizdosies, jo nevar veikt priekšmetstikļņa izstumšanas ciklu.

## 7 Basic Instructions for Use

### Darbības norādījumi



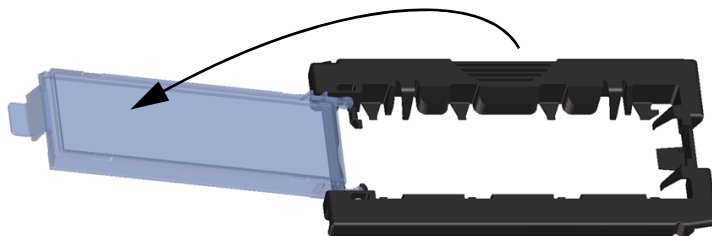
**Fattēls 37** Programmas Agilent Microarray Scan Control (Agilent mikromasīva skenēšanas vadība) logs, gatavs priekšmetstikliņu pievienošanai.

Skenera statuss ir redzams statusa joslā (loga Scan Control (Skenēšanas vadība) apakšā pa labi).

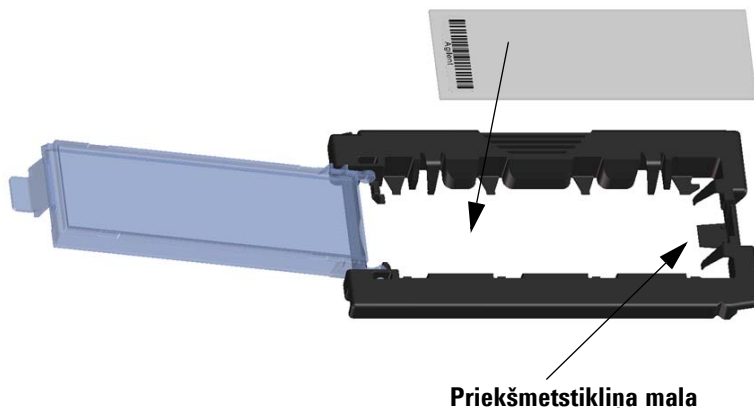
*Pirkstu nospiedumi var izraisīt fluorescences noteikšanas kļūdas. Pieskarieties tikai priekšmetstikliņa malām un, rīkojoties ar priekšmetstikliņiem, vienmēr izmantojiet cimdus.*

## 2. darbība. Priekšmetstikliņu ievietošana priekšmetstikliņu turētājos

- 1 Pirms priekšmetstikliņa ievietošanas novietojiet priekšmetstikliņu turētāju uz līdzenas virsmas ar caurspīdīgo pusi augšup un izcilni labajā pusē. Tādējādi var labāk nodrošināt pareizu priekšmetstikliņa salāgošanu, to ievietojot priekšmetstikliņu turētājā.
- 2 Uzmanīgi iespiediet un pavelciet augšup caurspīdīgā plastmasas pārsega galu ar izciļņiem, lai to atvērtu.



**Fattēls 38** Priekšmetstikliņu turētāja atvēršana



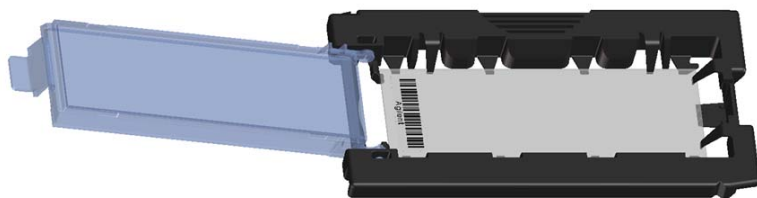
**Fattēls 39** Priekšmetstikliņa ievietošana priekšmetstikliņu turētājā

- 3 Priekšmetstikliņu ievietoiet turētājā šādi:
  - a turiet priekšmetstikliņu aiz svītrkoda gala;
  - b pārliecinieties, vai aktīvā mikromasīva virsma ir vērsta augšup, priekšmetstikliņu pārsega virzienā, ar svītrkodu kreisajā pusē;
  - c priekšmetstikliņa galu bez svītrkoda uzlīmes novietojiet uz priekšmetstikliņa malas. skatiet [Fattēls 39](#);
  - d priekšmetstikliņu uzmanīgi ielaidiet priekšmetstikliņu turētājā. skatiet [Fattēls 40](#);
  - e aizveriet priekšmetstikliņu plastmasas pārsegu, piespiežot izciļņa galu, līdz dzirdams klikšķis. Tādējādi priekšmetstikliņš novietojas pareizā vietā turētājā.
  - f Uzmanīgi iespiediet un pavelciet augšup caurspīdīgā plastmasas pārsega galu ar izciļņiem, lai to atkal atvērtu, un pārbaudiet, vai priekšmetstikliņš ir novietots pareizi.  
Pēc ievietošanas priekšmetstikliņš atrodas līdzeni un ir saskaņots ar salāgojuma punktiem uz priekšmetstikliņu turētāja;
  - g aizveriet priekšmetstikliņu plastmasas pārsegu, piespiežot izciļņa galu, līdz dzirdams klikšķis. Skatiet [Fattēls 41](#).

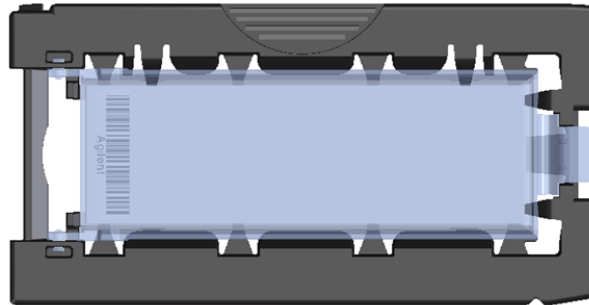


#### UZMANĪBU

Ja izcilnis uz priekšmetstikliņu plastmasas pārsega ir pārmērīgi nostiepts, tas nevar pareizi nonākt vietā ar klikšķi. Likvidējiet priekšmetstikliņu turētājus, kas aizverot vairs neklikšķ.



**Fattēls 40** Priekšmetstikliņu turētājā ievietots priekšmetstikliņš



**Fattēls 41** Priekšmetstikliņu turētājs – aizvērts ar priekšmetstikliņu

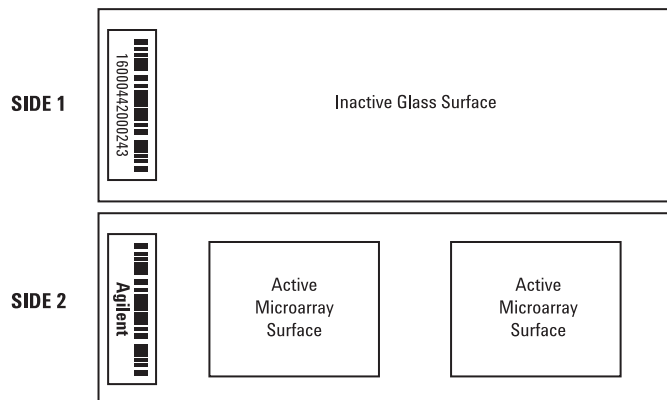
Agilent priekšmetstikliņiem ir divi svītrkodi (pa vienam katrā stikla pusē). Skatiet **Fattēls 42**. Priekšmetstikliņa aktīvo mikromasīvu pusi novietojiet pret priekšmetstikliņu turētāja pārsegu.



**UZMANĪBU**

Nepareizi ievietots priekšmetstikliņš var sabojāt SureScan Dx skeneri.

**Double-barcoded slide example**



**Fattēls 42** Priekšmetstikliņa orientācija

### 3. solis. Priekšmetstikliņu turētāju ievietošana kasetnē

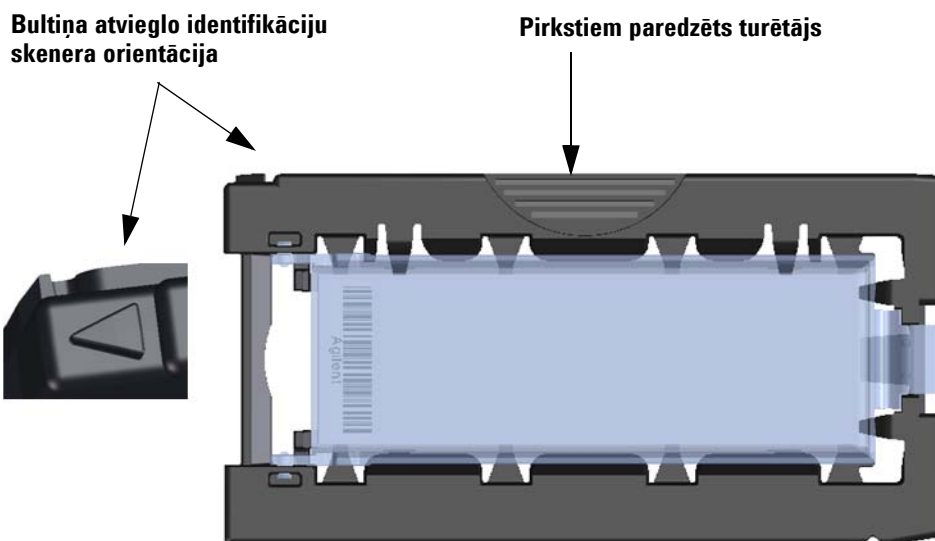
- 1 Programmas Scan Control (Skenēšanas vadība) logā noklikšķiniet uz **Open Door** (Atvērt durvis), lai atvērtu skenera durvis.



#### UZMANĪBU

Skenera durvis pareizi jāatver ar pogu Open Door (Atvērt durvis) programmā Scan Control (Skenēšanas vadība). Nemēģiniet atvērt durvis manuāli.

- 2 Paņemiet priekšmetstikliņu turētāju, izmantojot pirkstiem paredzēto turētāju. Ja priekšmetstikliņu turētājs tiek paņemts pareizi, bultiņa tā augšpusē ir vērsta pa kreisi. Skatiet [Fattēls 43](#).



**Fattēls 43** Slaidu turētājs palīdz pareizi ievietot priekšmetstikliņus



Ievietojiet priekšmetstikliņu turētāju jebkurā atvērtajā slotā. Slotu numuri ir skaidri marķēti uz priekšmetstikliņu kasetnes. Nespiediet priekšmetstikliņu turētāju kasetnē; tas ir viegli ievietojams, ja ir pareizi salāgots ar pirkstiem paredzēto turētāju augšpusē un bultiņa ir vērsta pa kreisi.



#### Fattēls 44 Priekšmetstikliņu turētāja ievietošana kasetnē

- 3 Pārlicinieties, vai priekšmetstikliņu turētājs ir ievietots kasetnes slotā apakšā.  
Ievietotā priekšmetstikliņa slotā numurs mirgo zilā krāsā.
- 4 Atkārtojiet 2.-3. soli, līdz visi priekšmetstikliņu turētāji ir ievietoti kasetnē.



#### UZMANĪBU

Ja priekšmetstikliņu turētājs tiek nepareizi ievietots kasetnē, var nopietni sabojāt SureScan Dx mikromasīva skeneri.

- 5 Programmā Scan Control (Skenēšanas vadība) noklikšķiniet uz **Close Door** (Aizvērt durvis).

Priekšmetstikliņiem, kuriem nav skenēšanas protokola, kas kartēts atbilstoši to noformējumam, skenēšanas protokols paliek tukšs un slotā stāvoklis paliek "Present" (Pašreizējais). Piešķiriet skenēšanas protokolu, kā aprakstīts šeit: "4. solis. Protokola skenēšanas iestatījumu iestatīšana vai mainīšana".

*Pašreizējie skenēšanas protokola iestatījumi katram atlasītajam priekšmetstikliņam tiek rādīti Scan Control (Skenēšanas vadība) programmatūras galvenajā logā.*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-krāsu gēnu izteiksmes mikromasīvi
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-krāsas gēnu izteiksmes mikromasīvi
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-krāsu gēnu izteiksmes mikromasīvi
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-krāsas gēnu izteiksmes mikromasīvi
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP mikromasīvi
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP mikromasīvi
<b>AgilentHD_miRNA</b>	Agilent HD miRNA mikromasīvi
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA mikromasīvi

#### 4. solis. Protokola skenēšanas iestatījumu iestatīšana vai mainīšana

Pirmoreiz iestatot priekšmetstikliņa skenēšanu, atlasiet izmantojamo skenēšanas protokolu.

- Katram priekšmetstikliņam slotu tabulā noklikšķiniet uz Scan Protocol (Skenēšanas protokols), lai atlasītu priekšmetstikliņa skenēšanai izmantojamo skenēšanas protokolu.

Agilent jūsu izvēlei un izmantošanai ar Agilent lielblīvuma (HD) mikromasīviem un Agilent G3 mikromasīviem piedāvā astoņus iepriekš ielādētus protokolus.

#### 5. solis (opcija). Izvades mapes maiņa

Varat mainīt norādīto izvades mapi, kur programma saglabā skenera izveidotos attēlu failus.

- Katram slotu tabulas priekšmetstikliņam noklikšķiniet uz Output Folder (Izvades mape) un pārlūkojiet līdz vēlamās mapes atrašanās vietai.

Agilent iesaka atlasīt vietēju mapi sekundārajā cietajā diskā.

#### 6. solis. Priekšmetstikliņu pievienošana skenēšanas rindai

1 Programmas Scan Control (Skenēšanas vadība) galvenajā logā noklikšķiniet uz **All to Queue** (Visus uz rindu) un visus priekšmetstikliņus no slotu tabulas ar stāvokli “Ready for Queue” (Gatavs rindai) pievienojiet skenēšanas rindai.

Tiek atvērts apstiprināšanas dialoglodziņš. Noklikšķiniet uz **Yes** (Jā), lai priekšmetstikliņus pievienotu rindai.

VAI

Programmas Scan Control (Skenēšanas vadība) slotu tabulā noklikšķiniet uz pirmā skenējamā priekšmetstikliņa šūnas **State** (Stāvoklis) un noklikšķiniet uz **Add to Queue** (Pievienot rindai).

- 2 Katram papildu skenējamam priekšmetstikliņam:
  - noklikšķiniet uz šūnas **State** (Stāvoklis) un atlasiet **Add to Queue First** (Pievienot rindai kā pirmo), lai priekšmetstikliņu pievienotu skenēšanas rindas sākumā, VAI
  - noklikšķiniet uz šūnas **State** (Stāvoklis) un atlasiet **Add to Queue Last** (Pievienot rindai kā pēdējo), lai priekšmetstikliņu pievienotu skenēšanas rindas beigās.

Ja no rindas jānoņem visi priekšmetstikliņi, noklikšķiniet uz **Empty Queue** (Iztukšot rindu) programmas Scan Control (Skenēšanas vadība) galvenajā logā.

## 7. solis. Priekšmetstikliņu skenēšana

- 1 Ja nepieciešams, programmas Scan Control (Skenēšanas vadība) galvenajā logā noklikšķiniet uz **Close Door** (Aizvērt durvis).

Pagaidiet, līdz durvis ir aizvērtas un ir iespējota poga **Start Scan** (Sākt skenēšanu).
- 2 Programmas Scan Control (Skenēšanas vadība) galvenajā logā noklikšķiniet uz **Start Scan** (Sākt skenēšanu), lai sāktu rindai pievienoto priekšmetstikliņu skenēšanu.

## 8. solis. Priekšmetstikliņu noņemšana

- 1 Programmas Scan Control (Skenēšanas vadība) logā noklikšķiniet uz **Open Door** (Atvērt durvis), lai atvērtu skenera durvis.
- 2 Atveriet skenera durvis un noņemiet priekšmetstikliņu turētājus no kasetnes.
- 3 Izņemiet priekšmetstikliņus no priekšmetstikliņu turētājiem, kā norādīts tālāk.
  - a Turiet priekšmetstikliņu turētāju aiz malām ar Agilent logotipu augšup.
  - b Uzmanīgi iespiediet un pavelciet augšup caurspīdīgā plastmasas pārsega galu ar izciļņiem, lai to atvērtu.
  - c Paspiediet augšup priekšmetstikliņa svītrkoda galu no priekšmetstikliņu turētāja apakšas, lai neatstātu pirkstu nospiedumus paraugu zonā.
  - d Satveriet priekšmetstikliņu no malām un izņemiet no priekšmetstikliņu turētāja.

## Instrukcijos lietuvių kalba

### Saugos simboliai ant skaitytuvo



**Įspėjamasis ženklas - gali suspausti judančios mechanizmų dalys**

Ženklas tvirtintas prie gaminio tose vietose, kur yra pavojus prispausti rankas arba pirštus. Šiose vietose laikykite rankas atokiau nuo judančių dalių.

### Saugos rekomendacijos

„SureScan Dx“ skaitytuvas yra suprojektuotas saugiam ir paprastam naudojimui. Prieš pradėdami naudotis „SureScan Dx“, įsitikinkite, kad suprantate ir laikotės visų įspėjimų ir perspėjimų.



**ĮSPĖJIMAS**

**Nebandykite atidaryti arba taisyti „SureScan Dx“ skaitytuvo vidinių komponentų. Rizikuojate būti paveikti aukštos įtampos elektros srovės ir kenksmingo lazerio spinduliavimo. Jeigu bus nuimtas pagrindinis dangtis, garantija nebebus taikoma.**



**ĮSPĖJIMAS**

**Prijunkite „SureScan Dx“ skaitytuvą prie įžeminto maitinimo lizdo. Saugumo sumetimais lizdas turi būti įžeminimas.**



**PERSPĖJIMAS**

Norint sumažinti vibracijas, atsirandančias dėl spartaus išilginio lazeriu sužadintos mikrogardelės nuskaitymo, statykite skaitytuvą ant tvirto laboratorinio suolo arba stalo. Nestatykite skaitytuvo šalia kitos laboratorinės įrangos, kuri gali sukelti vibracijas.



**PERSPĖJIMAS**

„SureScan Dx“ skaitytuvas yra jautrus besikondensuojančios drėgmės sąlygoms. Vadovaukitės atsargumo priemonėmis, pateiktomis gaminio dokumentacijoje. Žr. „**Drėgmės sąlygos**“ puslapyje 229.

## Drėgmės sąlygos

„SureScan Dx“ skaitytuvas yra jautrus besikondensuojančios drėgmės sąlygoms. Visada prieš atidarydami pakuotę montavimo vietoje, palikite įrenginį 12 valandų, kad nusistovėtų šiluminė pusiausvyra.

Norint užtikrinti optimalų našumą, dirbkite su „SureScan Dx“ tik žemiau pateiktose drėgnumo ribose.

Veikimas: 15-85 % santykinis drėgnumas prie 30 °C

## Naudojimo instrukcijos

### 1 žingsnis Įjunkite „SureScan Dx“ mikrogardelės skaitytuvą ir paleiskite „Scan Control“ (nuskaitymo valdymo) programą

- 1 Įjunkite „SureScan Dx“ skaitytuvą naudodami priekiniame prietaisų skydelyje esantį maitinimo mygtuką.
- 2 Įjunkite kompiuterizuotą darbo vietą ir palaukite, kol kompiuteris pasileis.
- 3 Norėdami paleisti „Scan Control“ programą, dukart spustelkite „Agilent Microarray Scan Control“ piktogramą.



#### Paveikslas 36 „Agilent Microarray Scan Control“ piktograma

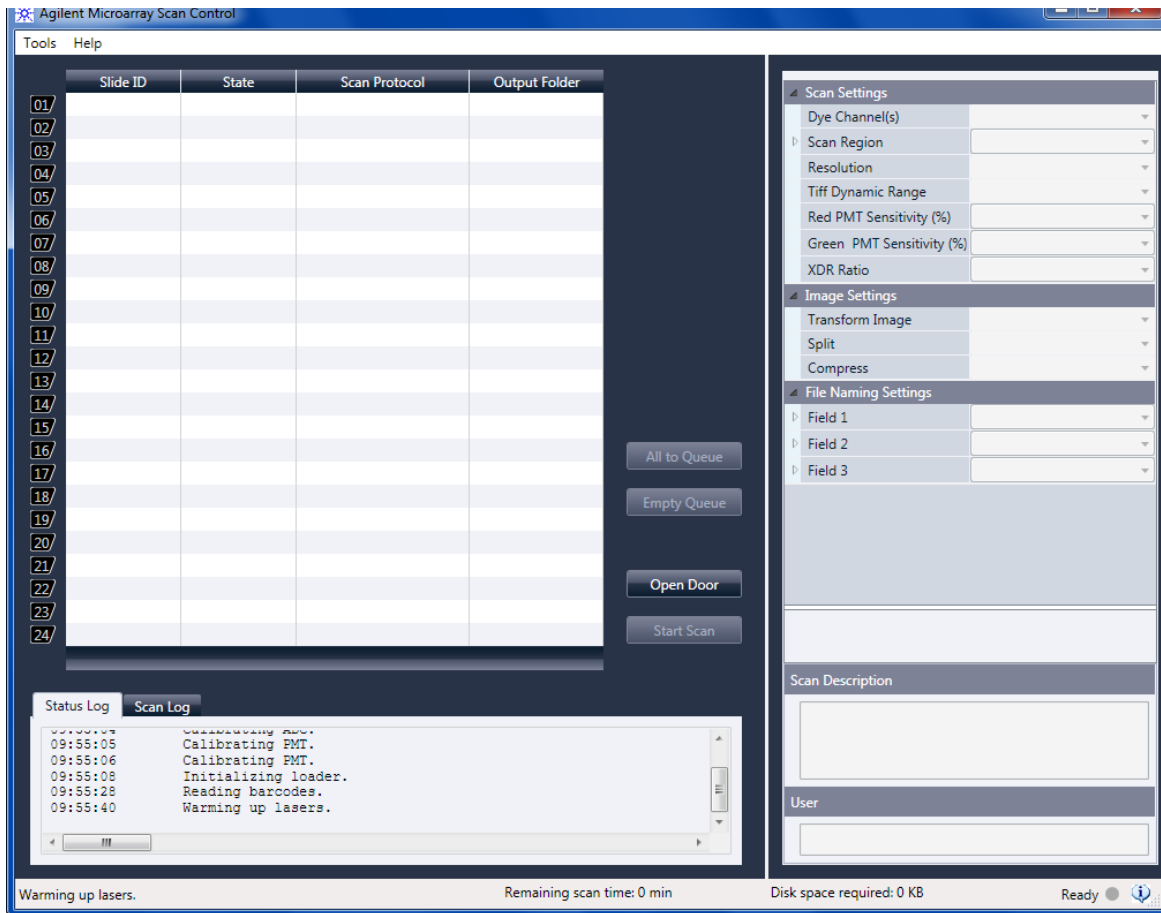
Kai paleidžiama programa, atsidaro pagrindinis „Agilent Microarray Scan Control“ programos langas ir skaitytuvas atlieka inicijavimo seką. Kai baigiama inicijavimo seką, aktyvinamas durų atidarymo mygtukas ir galite įdėti skaidres. Žr. [Paveikslas 37](#) puslapyje 230.

#### PASTABA

Jeigu įjungus skaitytuvą, jame yra 24 skaidrės, inicijavimas nepavyks, nes jis negali atlikti skaidrių išstūmimo ciklo.

## 7 Basic Instructions for Use

### Naudojimo instrukcijos



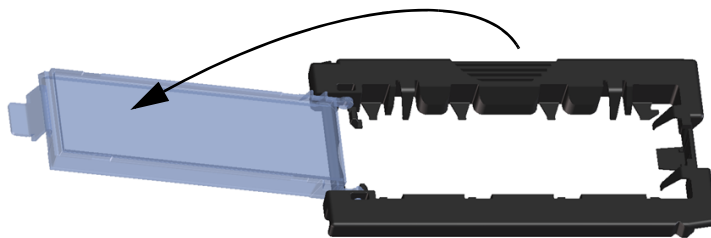
**Paveikslas 37** „Agilent Microarray Scan Control“ programos langas - pasiruošęs įtraukti skaidres.

Skaitytuvo būsena rodoma apatiniame dešiniame „Scan Control“ lango kampe, būsenos juostoje.

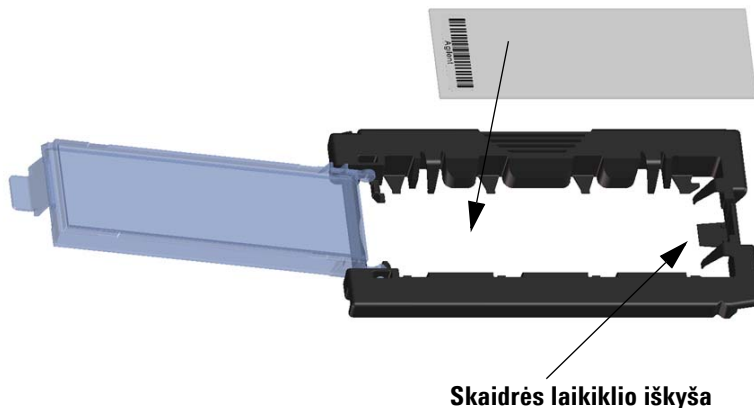
*Pirštų antspaudai sukelia klaidas naudojant medžiagų aptikimą pagal jų fluorescencinį švytėjimą. Kai dirbate su skaidrėmis visada dėvėkite pirštines ir lieskite tik skaidrės kraštus.*

## 2 žingsnis Įstatykite skaidrę į skaidrių laikiklį

- 1 Prieš įstatydami skaidrę, padėkite skaidrės laikiklį ant lygaus paviršiaus taip, kad skaidrus dangtelis būtų viršuje, o auselė dešinėje. Tai padės užtikrinti, kad tinkamai sulyginote skaidrę, kai įstatote ją į skaidrių laikiklį.
- 2 Norėdami atidaryti dangtelį švelniai spustelkite ir pakelkite plastikinio dangtelio galą su ausele.



**Paveikslas 38** Skaidrių laikiklio atidarymas



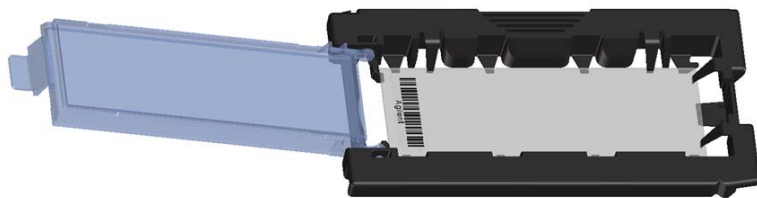
**Paveikslas 39** Įstatykite skaidrę į laikiklį

- 3 Įstatykite skaidrę į laikiklį kaip parodyta žemiau:
- a Laikykite skaidrę už galo su brūkšninio kodu.
  - b Įsitikinkite, kad aktyvus mikrogardelių paviršius būtų nukreiptas į viršų, skaidrės dangtelio kryptimi, o brūkšninis kodas būtų kairėje pusėje.
  - c Atsargiai padėkite skaidrės galą be brūkšninio kodo ant skaidrės laikiklio iškyšos. Žr. [Paveikslas 39](#).
  - d Atsargiai nuleiskite skaidrę į skaidrių laikiklį. Žr. [Paveikslas 40](#).
  - e Uždarykite plastikinį skaidrės dangtelį spausdami auselės kraštą iki išgirsite spragtelėjimą. Tai įstatys skaidrę į reikiamą padėtį laikiklyje.
  - f Švelniai spustelkite ir pakelkite plastikinio dangtelio galą su ausele, kad jį atidarytumėte ir įsitikinkite, kad skaidrės padėtis teisinga.
- Kartą įstačius skaidrę bus horizontalioje padėtyje ir atitiks skaidrės laikiklio centravimo taškus.
- g Uždarykite plastikinį skaidrės dangtelį spausdami auselės kraštą iki išgirsite spragtelėjimą. Žr. [Paveikslas 41](#).



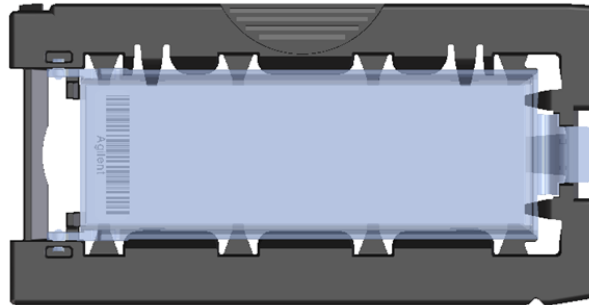
**PERSPĖJIMAS**

Jeigu per daug spausite auselę, esančią ant skaidrės laikiklio dangtelio, ji gali netinkamai užsifikuoti. Nebenaudokite skaidrių laikiklius, kurie uždarius neužsifikuoja.



**Paveikslas 40** Skaidrė įstatyta į skaidrių laikiklį





**Paveikslas 41** Skaidrių laikiklis uždarytas su skaidre

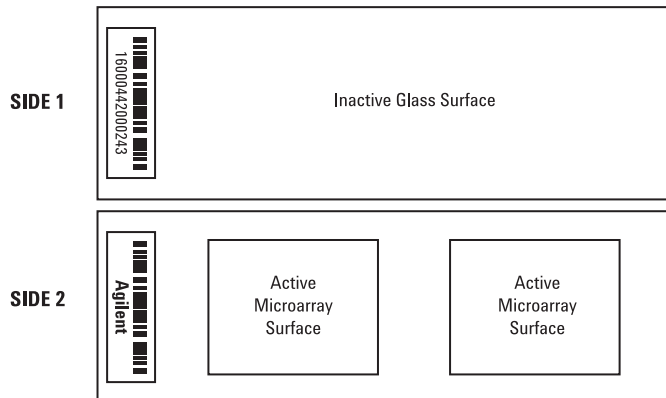
„Agilent“ skaidrės turi du brūkšninius kodus, po vieną kiekvienoje stiklo pusėje. Žr. **Paveikslas 42**. Padėkite skaidrę taip, kad aktyvi skaidrės mikrogardelės pusė būtų nukreipta į skaidrės laikiklio dangtelį.



**PERSPĖJIMAS**

Netinkamai įstatyta skaidrė gali sugadinti „SureScan Dx“ skaitytuvą.

**Double-barcoded slide example**



**Paveikslas 42** Skaidrės orientavimas

### 3 žingsnis Įstatykite skaidrės laikiklį į kasetę

- 1 „Scan Control“ programos lange spustelkite **„Open Door“** (atidaryti duris), kad atidarytumėte skaitytuvo duris.



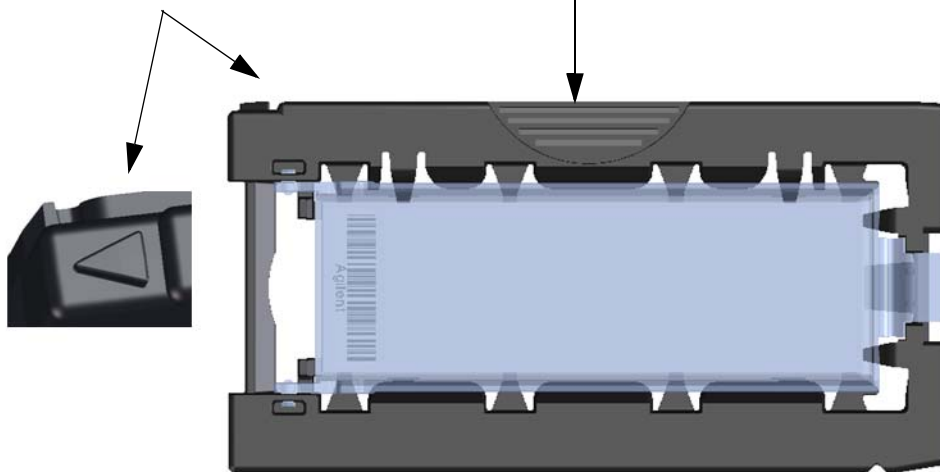
#### PERSPĖJIMAS

Teisingas skaitytuvo durų atidarymas galimas tik naudojant „Scan Control“ programos „Open Door“ (atidaryti duris) mygtuką. Nebandykite atidaryti durų rankiniu būdu.

- 2 Paimkite skaidrės laikiklį už tam numatytos vietos. Jeigu teisingai paimate skaidrių laikiklį, ant jo esanti rodyklė turi būti nukreipta į kairę. Žr. [Paveikslas 43](#).

Rodyklė padeda identifikuoti  
skaitytuvo orientavimas

Numatyta paėmimo vieta



**Paveikslas 43** Skaitytuvo laikiklis padeda teisingai įstatyti skaidrę

Įstatykite skaidrių laikiklį į bet kurią atvirą angą. Angų numeriai aiškiai sužymėti skaidrių kasetėje. Nedėkite skaidrės laikiklio į kasetę naudodami jėgą; jis įsistato lengvai, jeigu yra tinkamai centruotas naudojant numatytą paėmimo vietą ir kai rodyklė nukreipta į kairę.



**Paveikslas 44** Įstatykite skaidrių laikiklį į kasetę

- 3 Įsitikinkite, kad laikiklis įsistatė į kasetės angą iki galo. Angos, į kurią buvo įstatyta skaidrė, numeris mirksi mėlynai.
- 4 Pakartokite žingsnius nuo 2 iki 3 iki visi skaidrių laikikliai bus sudėti į kasetę.



**PERSPĖJIMAS**

Netinkamas skaidrės laikiklio įstatymas į kasetę gali sugadinti „SureScan Dx“ mikrogardelės skaitytuvą.

- 5 „Scan Control“ programoje spustelkite „Close Door“ (uždaryti duris).

Skaidrėms, kurios neturi nuskaitymo protokolo priskirto jų modeliui, nuskaitymo protokolas lieka tuščias ir angos būseną lieka „Present“ (esama). Priskirkite nuskaitymo protokolą kaip aprašyta „4 žingsnis Nuskaitymo protokolo nustatymas arba keitimas“.

„Scan Control“ programinės įrangos pagrindinio lango dešinėje srityje kiekvienai pasirinktai skaidrei rodomi esami nuskaitymo protokolo nustatymai.

<b>AgilentHD_GX_2Color</b>	„Agilent“ HD 2 spalvų genų išraiškos mikrogardelės
<b>AgilentHD_GX_1Color</b>	„Agilent“ HD 1 spalvos genų išraiškos mikrogardelės
<b>AgilentG3_GX_2Color</b>	„Agilent“ G3 2 spalvų genų išraiškos mikrogardelės
<b>AgilentG3_GX_1Color</b>	„Agilent“ G3 1 spalvos genų išraiškos mikrogardelės
<b>AgilentHD_CGH</b>	„Agilent“ HD CGH/CGH+SNP/CNV/ChIP mikrogardelės
<b>AgilentG3_CGH</b>	„Agilent“ G3 CGH/CGH+SNP/CNV/ChIP mikrogardelės
<b>AgilentHD_miRNA</b>	„Agilent“ HD miRNA mikrogardelės
<b>AgilentG3_miRNA</b>	„Agilent“ G3 miRNA mikrogardelės

#### 4 žingsnis Nuskaitymo protokolo nustatymas arba keitimas

Kai pirmą kartą nustatote skaidrės nuskaitymą, pasirinkite nuskaitymo protokolą, kurį naudosite.

- Kiekvienai skaidrei, esančiai stalo angoje, spustelkite „Scan Protocol“ (nuskaitymo protokolas) ir pasirinkite nuskaitymo protokolą, kurį naudosite skaidrei.

„Agilent“ pateikia aštuonis iš anksto įkeltus protokolus, kuriuos galite pasirinkti ir naudoti su „Agilent“ didelės raiškos (HD) ir „Agilent“ G3 mikrogardelėmis.

#### 5 žingsnis (Pasirenkamas papildomai) Išvesties aplanko keitimas

Galite keisti nurodytą išvesties aplanką, kuriame programa įrašo vaizdo failus, sukurtus skaitytuvo.

- Kiekvienai skaidrei esančiai stalo angoje, spustelkite „Output Folder“ (išvesties aplankas) ir pereikite į aplanką, kuriame norėsite įrašyti failus.

„Agilent“ rekomenduoja pasirinkti vietinį aplanką pagalbiniame standžiajame diske.

#### 6 žingsnis Įtraukite skaidres į nuskaitymo eilę

- 1 „Scan Control“ pagrindiniame lange spustelkite „**All to Queue**“ (visus į eilę), kad įtrauktumėte visas skaidres į stalo angas į nuskaitymo eilę su būseną „Ready for queue“ (pasiruošęs eilei).

Atsiras patvirtinimo dialogo langas. Spustelkite „**Yes**“ (taip), kad įtrauktumėte skaidres į eilę.

ARBA

„Scan Control“ stale su angomis spustelkite **„State“** (būsenos) langelį, kad nuskaitytumėte pirmąją skaidrę ir spustelkite **„Add to Queue“** (įtraukti į eilę).

- 2 Kiekvienai papildomai skaidrei, kurią norite nuskaityti,
  - Spustelkite **„State“** (būsenos) langelį ir pasirinkite **„Add to queue first“** (įtraukti į eilę pirmuoju), kad įtrauktumėte skaidrę į nuskaitymo eilę viršų.

ARBA

- Spustelkite **„State“** (būsenos) langelį ir pasirinkite **„Add to queue last“** (įtraukti į eilę paskutiniu ju), kad įtrauktumėte skaidrę į nuskaitymo eilę galą.

Jeigu reikia pašalinti visas skaidres iš eilės, „Scan Control“ pagrindiniame lange spustelkite **„Empty Queue“** (išvalyti eilę).

## 7 žingsnis Nuskaitykite savo skaidres

- 1 Jei reikia, „Scan Control“ pagrindiniame lange spustelkite **„Close Door“** (uždaryti duris).  
Palaukite iki durys užsidarys ir išjungs **„Start Scan“** (pradėti nuskaitymą) mygtukas.
- 2 „Scan Control“ pagrindiniame lange spustelkite **„Start Scan“** (pradėti nuskaitymą), kad pradėtumėte nuskaityti skaidres, kurios buvo įtrauktos į eilę.

## 8 žingsnis Išimkite skaidres

- 1 „Scan Control“ programos pagrindiniame lange spustelkite **„Open Door“** (atidaryti duris), kad atidarytumėte skaitytuvo duris.
- 2 Atidarykite skaitytuvo duris ir išimkite skaidrių laikiklius iš kasetės.
- 3 Išimkite skaidres iš skaidrių laikiklių kaip aprašyta žemiau:
  - a Laikykite skaidrių laikiklį už šonų taip, kad „Agilent“ logotipas būtų viršuje.
  - b Švelniai spustelkite ir pakelkite plastikinio dangtelio galą su ausele, kad atidarytumėte dangtelį.
  - c Pro skaidrės laikiklio apačią pakelkite skaidrės galą su brūkšniniu kodu į viršų, kad pirštų antspaudai nepatektų ant mėginio.
  - d Suimkite skaidrę už šonų ir išimkite iš skaidrių laikiklio.

## Instrukcje w języku polskim

### Symbole dotyczące bezpieczeństwa znajdujące się na skanerze



#### Symbol „NIEBEZPIECZEŃSTWO PRZYCIĘCIA PALCÓW”

Ten symbol jest umieszczany na produkcie w miejscu występowania potencjalnego zagrożenia przycięcia dłoni lub palców. Należy trzymać ręce z dala od ruchomych części znajdujących się w tym miejscu.

### Zalecenia dotyczące bezpieczeństwa

Skaner SureScan Dx został zaprojektowany w taki sposób, aby jego używanie było bezpieczne i łatwe. Przed rozpoczęciem użytkowania skanera SureScan Dx należy zapoznać się ze wszystkimi ostrzeżeniami i przestrogami oraz zastosować się do nich.



#### OSTRZEŻENIE

Nie należy podejmować prób naprawy ani uzyskania dostępu do wewnętrznych elementów skanera SureScan Dx. Grozi to porażeniem prądem o wysokim napięciu oraz ekspozycją na szkodliwe promieniowanie lasera. Zdjęcie pokrywy głównej powoduje utratę gwarancji.



#### OSTRZEŻENIE

Skaner SureScan Dx należy podłączyć do uziemionego gniazda sieciowego. Uziemienie gniazda zapewnia bezpieczeństwo.



#### PRZESTROGA

W celu zminimalizowania wibracji powstających na skutek szybkiego skanowania mikromacierzy wiązką lasera wzbudzającego należy zamontować skaner na stabilnym blacie laboratoryjnym. Nie należy montować skanera w pobliżu innych urządzeń laboratoryjnych, które mogą powodować powstawanie wibracji.



#### PRZESTROGA

Skaner SureScan Dx jest wrażliwy na warunki, w których następuje kondensacja pary wodnej. Należy stosować się do środków ostrożności podanych w dokumentacji produktu. Patrz: „Wilgotność powietrza” na stronie 239.

## Wilgotność powietrza

Skaner SureScan Dx jest wrażliwy na warunki, w których następuje kondensacja pary wodnej. Przed otwarciem opakowania transportowego należy zawsze odczekać 12 godzin w celu ustabilizowania si temperatury urządzenia w nowym miejscu.

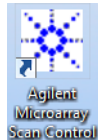
W celu zagwarantowania optymalnej pracy skanera SureScan Dx należy zapewnić poniższe warunki dotyczące wilgotności powietrza.

Warunki działania urządzenia: od 15% do 85% wilgotności względnej w temperaturze 30°C.

## Instrukcje dotyczące używania urządzenia

### Krok 1. Włączanie skanera mikromacierzy SureScan Dx i uruchamianie programu Scan Control

- 1 Włączyć skaner SureScan Dx za pomocą włącznika zasilania znajdującego się z przodu urządzenia.
- 2 Włączyć stację roboczą i poczekać na jej uruchomienie.
- 3 Kliknąć dwukrotnie ikonę **Agilent Microarray Scan Control** w celu uruchomienia programu Scan Control.



**Rycina 36** Ikona programu Agilent Microarray Scan Control.

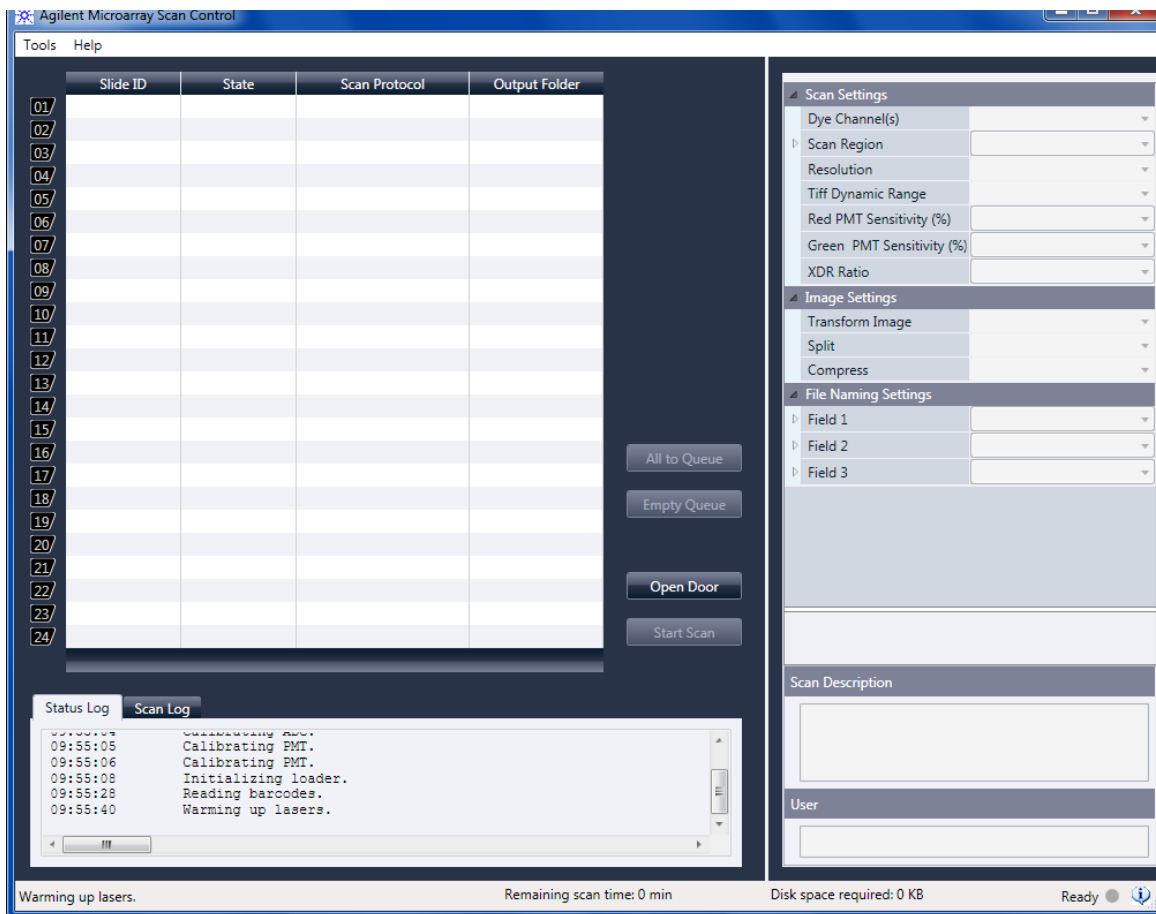
Po uruchomieniu programu Agilent Microarray Scan Control zostanie wyświetlone jego okno główne, a skaner przeprowadzi sekwencję inicjalizacji. Po zakończeniu sekwencji inicjalizacji przycisk Open Door (Otwórz drzwiczki) będzie aktywny i będzie można ładować slajdy. Patrz: [Rycina 37](#) na stronie 240.

### UWAGA

Jeśli w momencie włączenia skanera są załadowane 24 slajdy, inicjalizacja nie powiedzie się, ponieważ przeprowadzenie cyklu wysuwania slajdu nie będzie możliwe.

## 7 Basic Instructions for Use

### Instrukcje dotyczące używania urządzenia



**Rycina 37** Okno programu Agilent Microarray Scan Control, w którym można dodawać slajdy.

Informacja o stanie skanera jest widoczna w prawym dolnym rogu okna programu Scan Control, na pasku stanu.

### Krok 2. Umieszczanie slajdów w oprawach slajdów

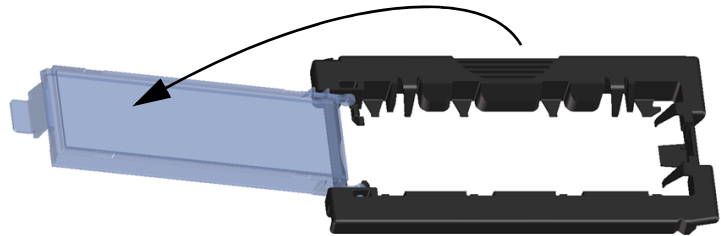
*Odciski palców powodują błędy w detekcji fluorescencji. Podczas obchodzenia się ze slajdami należy zawsze używać rękawiczek i dotykać tylko brzegów slajdów.*

- 1 Przed umieszczeniem slajdu w oprawie slajdu umieścić oprawę slajdu na płaskiej powierzchni, tak aby przezroczysta pokrywa była skierowana do góry, a uchwyt pokrywy znajdował się po prawej stronie. Dzięki temu prawidłowe

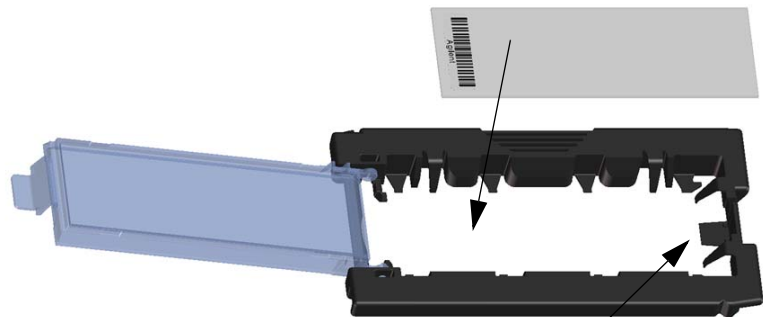


wyrównanie slajdu podczas umieszczania w oprawie slajdu będzie łatwiejsze.

- 2 Delikatnie wcisnąć do środka i pociągnąć w górę uchwyt przezroczystej pokrywy, aby ją otworzyć.



**Rycina 38** Otwieranie oprawy slajdu.



**Podpora slajdu**

**Rycina 39** Umieszczanie slajdu w oprawie slajdu.

## 7 Basic Instructions for Use

### Instrukcje dotyczące używania urządzenia

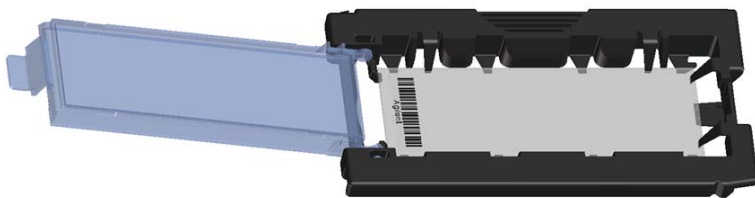
- 3 Umieścić slajd w oprawie, wykonując następujące czynności:
  - a Chwycić slajd za koniec z kodem kreskowym.
  - b Upewnić się, że aktywna powierzchnia, na której znajduje się mikromacierz, jest zwrócona ku górze, w kierunku pokrywy oprawy, a kod kreskowy znajduje się z lewej strony.
  - c Ostrożnie umieścić koniec slajdu, na którym nie ma kodu kreskowego, na podporze slajdu. Patrz: [Rycina 39](#).
  - d Delikatnie opuścić slajd do oprawy slajdu. Patrz: [Rycina 40](#).
  - e Zamknąć plastikową pokrywę oprawy, naciskając uchwyt pokrywy do momentu kliknięcia. Dzięki temu slajd zostanie przesunięty na właściwe miejsce w oprawie.
  - f Delikatnie wcisnąć do środka i pociągnąć w górę uchwyt przezroczystej pokrywy, aby ponownie ją otworzyć, a następnie sprawdzić, czy slajd znajduje się w prawidłowym położeniu w oprawie.

Slajd po włożeniu leży płasko w oprawie i pasuje do znajdujących się w niej punktów wyrównania.
  - g Zamknąć plastikową pokrywę oprawy, naciskając uchwyt pokrywy do momentu kliknięcia. Patrz: [Rycina 41](#).

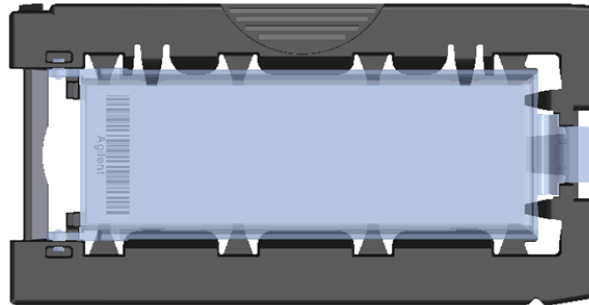


#### PRZESTROGA

Jeśli uchwyt plastikowej pokrywy jest zbyt mocno odgięty, może ona nie zatrząskiwać się prawidłowo na swoim miejscu. Jeśli oprawa slajdu nie wydaje odgłosu kliknięcia podczas zamykania pokrywy, należy ją wyrzucić.



**Rycina 40** Slajd umieszczony w oprawie slajdu.



**Rycina 41** Zamknięta oprawa slajdu z umieszczonym w niej slajdem.

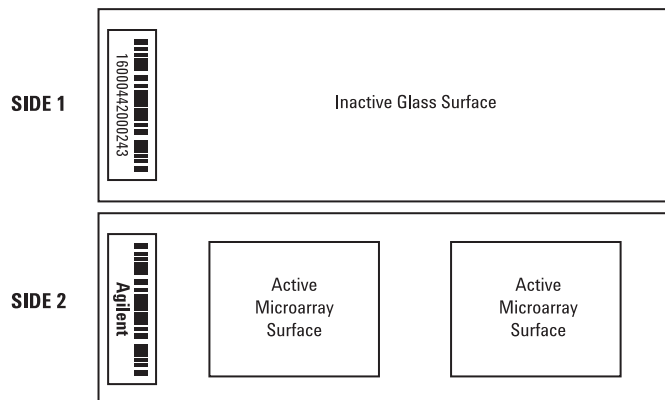
Slajdy firmy Agilent mają dwa kody kreskowe, po jednym na każdej z dwóch szklanych powierzchni slajdu. Patrz: [Rycina 42](#). Umieścić aktywną stronę slajdu, na której znajduje się mikromacierz, skierowaną do pokrywy oprawy slajdu.



### PRZESTROGA

Nieprawidłowe umieszczenie slajdu może spowodować uszkodzenie skanera SureScan Dx.

#### Double-barcoded slide example



**Rycina 42** Orientacja slajdu.

## 7 Basic Instructions for Use

Instrukcje dotyczące używania urządzenia

### Krok 3. Ładowanie opraw slajdów do kasety

- 1 W oknie programu Scan Control kliknąć przycisk **Open Door** (Otwórz drzwiczki) w celu otwarcia drzwiczek skanera.



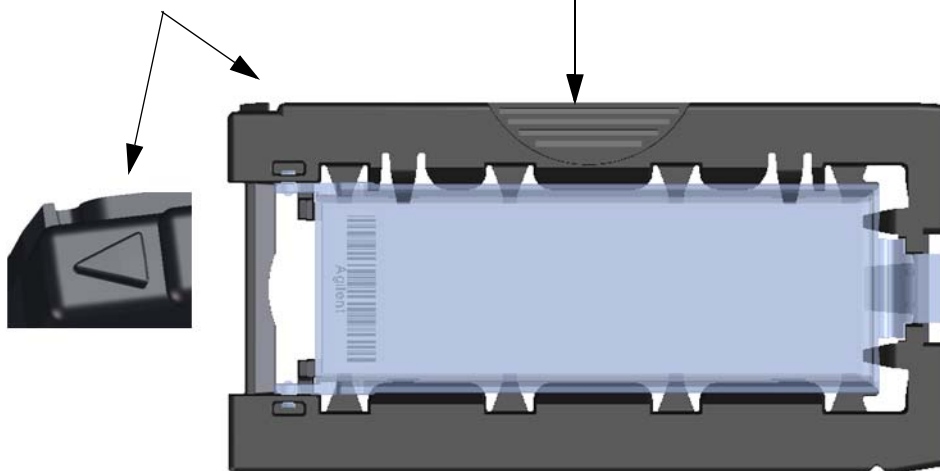
#### PRZESTROGA

Prawidłowe otwieranie drzwiczek skanera polega na użyciu przycisku Open Door (Otwórz drzwiczki) w programie Scan Control. Nie należy próbować ręcznie otwierać drzwiczek.

- 2 Chwycić oprawę slajdu za uchwyt na palce. Jeśli położenie oprawy jest prawidłowe, strzałka na jej wierzchniej części jest skierowana w lewo. Patrz: [Rycina 43](#).

Strzałka ułatwia ustawienie  
oprawy w prawidłowym położeniu

Uchwyt na palec



**Rycina 43** Oprawy slajdów ułatwiają prawidłowe włożenie slajdów.

Umieścić oprawę slajdu w dowolnym pustym gnieździe. Numery gniazd są wyraźnie zaznaczone na kasecie na slajdy. Nie należy na siłę umieszczać oprawy slajdu w kasecie.

Wprowadzenie oprawy jest łatwe, jeśli znajduje się ona w prawidłowej pozycji, tj. uchwyt na palce jest skierowany do góry, a strzałka – w lewo.



**Rycina 44** Umieszczanie oprawy slajdu w kasecie.

- 3 Upewnić się, że oprawa slajdu opiera się na dnie gniazda kasety.

Numer gniazda, do którego załadowano slajd, miga na niebiesko.

- 4 Powtórzyć kroki od 2 do 3 do momentu załadowania wszystkich opraw slajdów do kasety.



#### PRZESTROGA

Nieprawidłowe umieszczenie oprawy slajdu w kasecie może spowodować poważne uszkodzenie skanera mikromacierzy SureScan Dx.

- 5 W oknie programu Scan Control kliknąć przycisk **Close Door** (Zamknij drzwiczki).

W przypadku slajdu, dla którego nie istnieje protokół skanowania odpowiadający jego układowi, protokół skanowania jest pusty, a w polu State (Stan) tego gniazda jest wyświetlany stan Present (Obecny). Należy przypisać protokół skanowania (patrz: „[Krok 4. Konfiguracja lub zmiana ustawień protokołu skanowania](#)”).

## 7 Basic Instructions for Use

### Instrukcje dotyczące używania urządzenia

*Bieżące ustawienia protokołu skanowania dla każdego wybranego slajdu są wyświetlane w prawym okienku okna głównego oprogramowania Scan Control.*

#### Krok 4. Konfiguracja lub zmiana ustawień protokołu skanowania

Podczas pierwszej konfiguracji skanowania slajdu należy wybrać protokół skanowania, który będzie używany.

- W przypadku każdego slajdu w tabeli gniazd należy kliknąć pozycję Scan Protocol (Protokół skanowania) i wybrać protokół skanowania, który będzie używany do skanowania danego slajdu.

Firma Agilent zapewnia osiem fabrycznie załadowanych protokołów, których można używać z mikromacierzami wysokiej gęstości (HD, high density) i mikromacierzami G3 firmy Agilent.

<b>AgilentHD_GX_2Color</b>	Mikromacierze HD firmy Agilent do badań ekspresji genów przy użyciu 2 barwników
<b>AgilentHD_GX_1Color</b>	Mikromacierze HD firmy Agilent do badań ekspresji genów przy użyciu 1 barwnika
<b>AgilentG3_GX_2Color</b>	Mikromacierze G3 firmy Agilent do badań ekspresji genów przy użyciu 2 barwników
<b>AgilentG3_GX_1Color</b>	Mikromacierze G3 firmy Agilent do badań ekspresji genów przy użyciu 1 barwnika
<b>AgilentHD_CGH</b>	Mikromacierze HD do badań CGH/CGH+SNP/CNV/ChIP firmy Agilent
<b>AgilentG3_CGH</b>	Mikromacierze G3 do badań CGH/CGH+SNP/CNV/ChIP firmy Agilent
<b>AgilentHD_miRNA</b>	Mikromacierze HD firmy Agilent do badań miRNA
<b>AgilentG3_miRNA</b>	Mikromacierze G3 firmy Agilent do badań miRNA

#### Krok 5 (opcjonalny). Zmiana folderu danych wyjściowych

Istnieje możliwość zmiany folderu danych wyjściowych, w którym program zapisuje pliki obrazów utworzone przez skaner.

- W przypadku każdego slajdu znajdującego się w tabeli gniazd należy kliknąć pozycję Output Folder (Folder danych wyjściowych) i przejść do lokalizacji żadanego folderu.

Firma Agilent zaleca wybór lokalnego folderu na dysku twardym określonym jako urządzenie drugorzędne.

#### Krok 6. Dodawanie slajdów do kolejki skanowania

- 1 W oknie głównym programu Scan Control kliknąć przycisk **All to Queue** (Wszystkie do kolejki) w celu dodania do kolejki skanowania wszystkich slajdów z tabeli gniazd, które w tabeli State (Stan) mają stan Ready for queue (Gotowy do umieszczenia w kolejce).

Zostanie wyświetlone okno dialogowe z potwierdzeniem. Kliknąć przycisk **Yes** (Tak), aby dodać slajdy do kolejki.

LUB

W tabeli gniazd programu Scan Control kliknąć komórkę **State** (Stan) odpowiadającą pierwszemu slajdowi, który ma zostać przeskanowany, a następnie kliknąć przycisk **Add to Queue** (Dodaj do kolejki).

- 2 W przypadku każdego kolejnego slajdu, który ma zostać przeskanowany:
  - Kliknąć komórkę **State** (Stan) i wybrać pozycję **Add to queue first** (Dodaj na początek kolejki), aby dodać slajd jako pierwszy element kolejki skanowania.

LUB

- Kliknąć komórkę **State** (Stan) i wybrać pozycję **Add to queue last** (Dodaj na koniec kolejki), aby dodać slajd jako ostatni element kolejki skanowania.

Aby usunąć wszystkie slajdy z kolejki, należy kliknąć przycisk **Empty Queue** (Opróżnij kolejkę) w oknie głównym programu Scan Control.

## Krok 7. Skanowanie slajdów

- 1 Jeśli to konieczne, w oknie głównym programu Scan Control kliknąć przycisk **Close Door** (Zamknij drzwiczki).  
Zaczekać na zamknięcie drzwiczek i uaktywnienie przycisku **Start Scan** (Rozpocznij skanowanie).
- 2 W oknie głównym programu Scan Control kliknąć przycisk **Start Scan** (Rozpocznij skanowanie), aby rozpocząć skanowanie slajdów, które zostały dodane do kolejki.

## Krok 8. Wyjmowanie slajdów

- 1 W oknie programu Scan Control kliknąć przycisk **Open Door** (Otwórz drzwiczki) w celu otwarcia drzwiczek skanera.
- 2 Otworzyć drzwiczki skanera i wyjąć oprawy slajdów z kasety.
- 3 Wyjąć slajdy z opraw slajdów, wykonując następujące czynności:
  - a Chwycić oprawę slajdu za jej boki, tak aby logo firmy Agilent było skierowane do góry.
  - b Delikatnie wcisnąć do środka i pociągnąć w górę uchwyt przezroczystej pokrywy, aby ją otworzyć.
  - c Wypchnąć koniec slajdu, na którym znajduje się kod kreskowy, od spodu oprawy, aby uniknąć powstania odcisków palców w miejscu, w którym znajdują się próbki.
  - d Chwycić slajd za brzegi i wyjąć z oprawy slajdu.

## Instruções em Português

### Símbolos de segurança no scanner



#### Símbolo de PERIGO DE ENTALAMENTO

Este símbolo é colocado no produto nos locais onde exista perigo de entalar as mãos ou os dedos. Nesta zona mantenha as mãos afastadas de partes móveis.

### Regras de segurança

O scanner SureScan Dx foi concebido para ser seguro e fácil de usar. Certifique-se de examina e compreende todos os avisos e advertências antes de usar o scanner SureScan Dx.



#### ADVERTÊNCIA

**Não tente reparar nem obter acesso aos componentes internos do scanner SureScan Dx. Arrisca-se a ficar exposto a tensão elétrica elevada e radiação laser nociva. Abrir a cobertura principal anula a garantia.**



#### ADVERTÊNCIA

**Ligue o scanner SureScan Dx a uma tomada elétrica com ligação de terra. A utilização segura do scanner depende da existência de uma ligação à terra.**



#### ATENÇÃO

A fim de minimizar a vibração causada pela digitalização rápida da excitação do laser ao longo do microarray, instale o scanner numa bancada ou mesa firme. Não instale o scanner na proximidade de outros equipamentos de laboratório que possam causar vibrações.



#### ATENÇÃO

O scanner SureScan Dx é sensível a condições de condensação de humidade. Siga as precauções indicadas na documentação do produto. Consulte [“Condições de humidade”](#) na página 249.



## Condições de humidade

O scanner SureScan Dx é sensível a condições de condensação de humidade. Antes de abrir a caixa de transporte, espere 12 horas para que o equilíbrio térmico local seja atingido.

Para assegurar desempenho ideal, use o scanner SureScan Dx apenas no seguinte intervalo de humidade.

Em funcionamento: 15% a 85% HR a 30 °C

## Instruções de utilização

### Passo 1. Ligue o Scanner Microarray SureScan Dx e abra o programa Scan Control

- 1 Ligue o scanner SureScan Dx usando o interruptor na frente do instrumento.
- 2 Ligue o workstation (computador) e espere que inicialize.
- 3 Faça duplo-clique no ícone **Agilent Microarray Scan Control** para abrir o programa Scan Control.



**Figura 36** Ícone do Agilent Microarray Scan Control

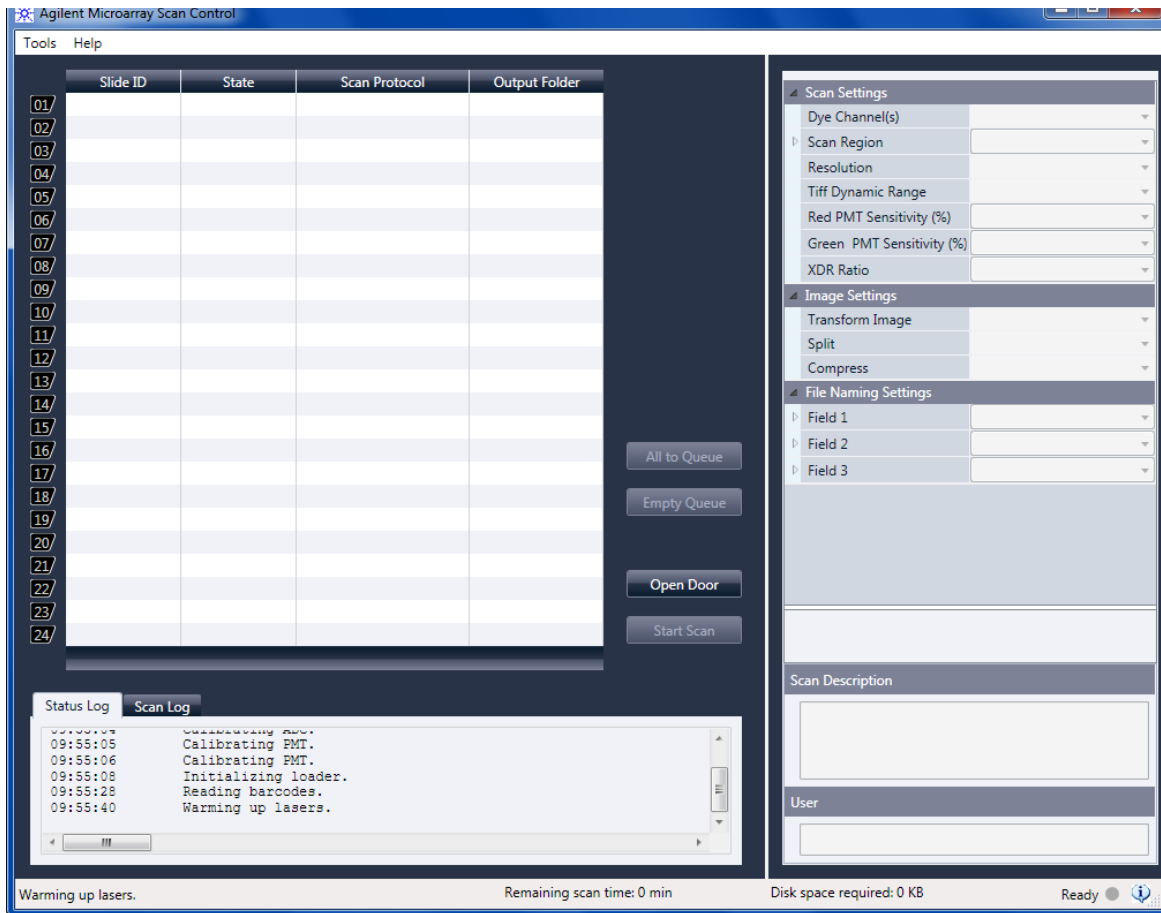
Quando o programa se inicia, a janela principal do programa Agilent Microarray Scan Control abre-se e o scanner executa a sua sequência de inicialização. Após o final da sequência de inicialização o botão Open Door (abrir porta) é ativado e as lâminas podem ser introduzidas na cassete. Consulte a [Figura 37](#) na página 250.

### NOTA

Se ao ligar o scanner todas as ranhuras da cassete estiverem ocupadas com lâminas, a inicialização falhará pois o scanner não conseguirá efetuar o ciclo de ejeção de lâmina.

## 7 Basic Instructions for Use

### Instruções de utilização



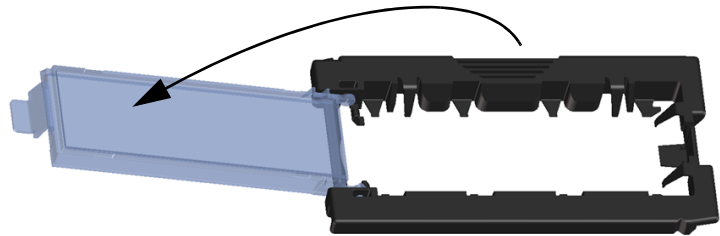
**Figura 37** Janela do programa Agilent Microarray Scan Control – pronto para adicionar lâminas.

O estado do scanner é indicado no canto inferior direito da janela do Scan Control, na barra de estado.

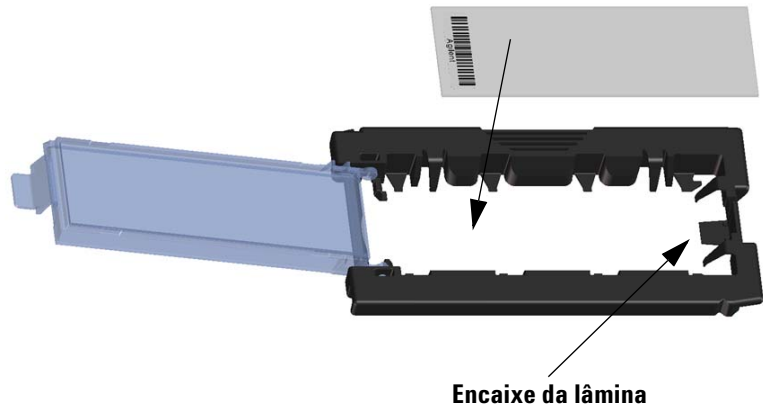
*As dedadas ou impressões digitais causam erros na detecção de fluorescência. Toque apenas nas margens da lâmina e use sempre luvas quando manusear as lâminas.*

### Passo 2. Insira lâminas nos respectivos suportes

- 1 Antes de inserir a lâmina, coloque o suporte da lâmina numa superfície plana, com a tampa transparente virada para cima, e a aba para a direita. Isto ajuda a garantir que a lâmina fica devidamente alinhada quando a inserir no suporte de lâminas.
- 2 Abra a tampa plástica transparente empurrando a extremidade com a aba suavemente para dentro e puxando para cima.



**Figura 38** Abrir o suporte da lâmina



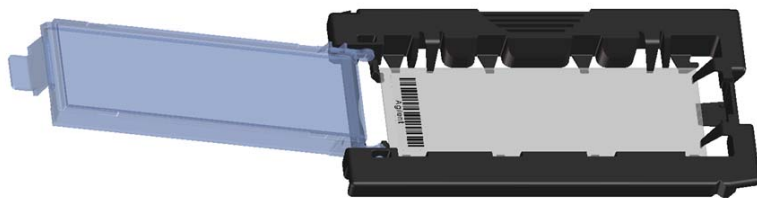
**Figura 39** Inserir a lâmina no respetivo suporte

- 3 Insira a lâmina no suporte, da seguinte forma:
  - a Pegue na lâmina pela extremidade com o código de barras.
  - b Certifique-se de que a superfície com o microarray ativo fica virada para cima, na direção da tampa da lâmina, com o código de barras do lado esquerdo.
  - c Com cuidado introduza a extremidade da lâmina sem o código de barras no encaixe para a lâmina. Consulte a [Figura 39](#).
  - d Suavemente pouse a lâmina sobre o respetivo suporte. Consulte a [Figura 40](#).
  - e Feche a tampa de plástico, carregando na extremidade da aba até ouvir um clique. Isto fará deslocar a lâmina para a posição correta no suporte.
  - f Empurre suavemente para dentro e puxando para cima e verificando se a lâmina está posicionada corretamente.  
Uma vez inserida, a lâmina deve ficar numa posição plana e coincidir com pontos de alinhamento do suporte.
  - g Feche a tampa de plástico, carregando na extremidade da aba até ouvir um clique. Consulte a [Figura 41](#).

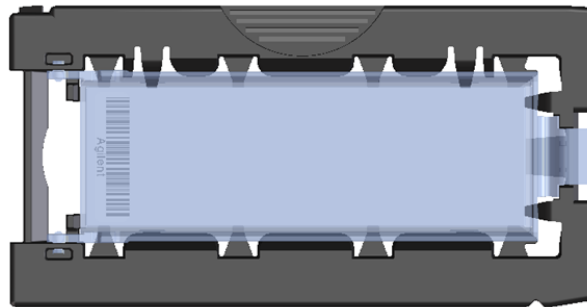


**ATENÇÃO**

Se a aba da tampa de plástico estiver esticada em demasia, poderá não fazer o clique que indica o correto posicionamento. Elimine os suportes de lâmina que já não façam clique quando os fechar.



**Figura 40** Lâmina inserida no respetivo suporte



**Figura 41** Suporte de lâmina – fechado com a lâmina

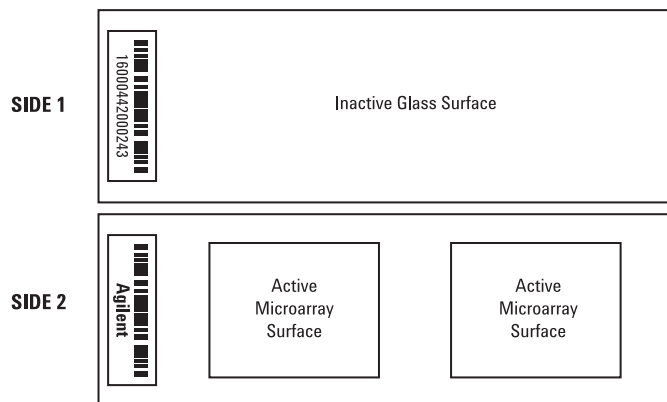
As lâminas Agilent têm dois códigos de barras, um em cada lado do vidro. Consulte a [Figura 42](#). Coloque o lado do microarray ativo virado para a tampa do suporte da lâmina.



**ATENÇÃO**

Uma lâmina incorretamente inserida pode danificar o scanner SureScan Dx.

**Double-barcoded slide example**



**Figura 42** Orientação da lâmina

### Passo 3. Carregue os suportes de lâmina na cassette

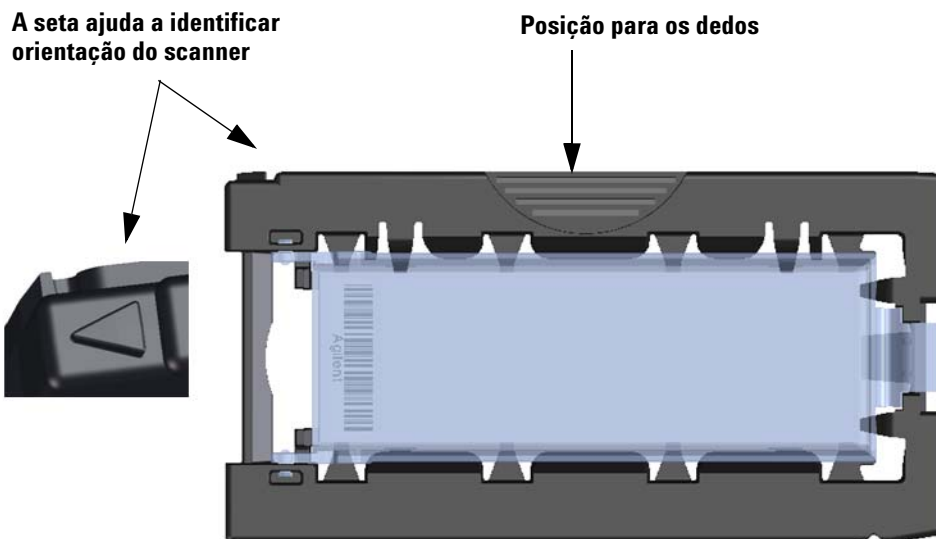
- 1 Na janela do programa Scan Control clique em **Open Door** (abrir porta) para abrir a porta do scanner.



#### ATENÇÃO

A forma correta de abrir a porta do scanner consiste em usar o botão Open Door (abrir porta) no programa Scan Control. Não tente abrir a porta manualmente.

- 2 Pegue no suporte da lâmina pela posição para os dedos. Se pegar no suporte corretamente a seta no topo do suporte de lâmina deverá apontar para a esquerda. Consulte a [Figura 43](#).



**Figura 43** O suporte da lâmina ajuda a inserir as lâminas corretamente

Insira um suporte de lâmina em qualquer ranhura aberta. Os números das ranhuras estão claramente assinalados na cassete de lâminas. Não force o suporte de lâminas a entrar na cassete; este entrará facilmente se estiver corretamente alinhado, com a posição dos dedos no topo e com a seta virada para a esquerda.



**Figura 44** Inserir um suporte de lâmina na cassete

- 3** Certifique-se de que o suporte de lâmina está assente na base da ranhura da cassete.  
O número da ranhura com a lâmina inserida pisca a azul.
- 4** Repita os passos 2 a 3 até todas as lâminas terem sido carregadas na cassete.



**ATENÇÃO**

A incorreta inserção do suporte de lâmina na cassete pode resultar em danos graves no scanner SureScan Dx Microarray.

- 5** No programa Scan Control clique em **Close Door** (fechar porta).

No caso de lâminas que não tenham um protocolo de digitalização associado com o seu formato, a informação de protocolo de digitalização ficará em branco e o estado da ranhura permanece como “Present”(e). Atribua um protocolo de digitalização, conforme descrito em [“Passo 4. Defina ou altere as definições do protocolo de digitalização”](#).

*Para cada lâmina selecionada são mostradas as atuais definições de protocolo de digitalização, na janela principal do software Scan Control, lado direito.*

<b>AgilentHD_GX_2Color</b>	Microarrays de expressão génica Agilent HD 2-cores
<b>AgilentHD_GX_1Color</b>	Microarrays de expressão génica Agilent HD 1-cores
<b>AgilentG3_GX_2Color</b>	Microarrays de expressão génica Agilent G3 2-cores
<b>AgilentG3_GX_1Color</b>	Microarrays de expressão génica Agilent G3 1-cores
<b>AgilentHD_CGH</b>	Microarrays Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Microarrays Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Microarrays Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Microarrays Agilent G3 miRNA

#### **Passo 4. Defina ou altere as definições do protocolo de digitalização**

A primeira vez que configurar a digitalização de uma lâmina escolha um protocolo a usar.

- Para cada lâmina na tabela de ranhuras, clique no Scan Protocol e selecione um protocolo de digitalização para digitalizar a lâmina.

A Agilent fornece oito protocolos predefinidos à sua escolha para utilização com os microarrays Agilent de elevada densidade (HD) e microarrays Agilent G3.

#### **Passo 5. (Opcional) Altere a pasta de destino**

Pode alterar a pasta de destino onde o programa grava os ficheiros de imagem criados pelo scanner.

- Para cada lâmina na tabela de ranhuras, clique na Output Folder (pasta de destino) e indique a localização da pasta desejada.

A Agilent recomenda a seleção de uma pasta local num disco rígido secundário.

#### **Passo 6. Adicione lâminas à fila de digitalização**

1 Na janela principal do Scan Control clique em **All to Queue** (todas para a fila) para adicionar todas as lâminas da tabela de ranhuras com o estado “Ready for queue” (pronta para a fila de digitalização).

Aparece uma janela de pedido de confirmação. Clique em **Yes** (sim) para adicionar as lâminas à fila.

OU



Na tabela de ranhuras do Scan Control clique na célula **State** (estado) da primeira lâmina a digitalizar e clique em **Add to Queue** (adicionar à fila).

- 2 Para cada lâmina adicional que deseje digitalizar,
  - Clique na célula **State** (estado) e selecione **Add to queue first** (adicionar ao início da fila) para adicionar a lâmina ao início da fila de digitalização.

OU

- Clique na célula **State** (estado) e selecione **Add to queue last** (adicionar ao fim da fila) para adicionar a lâmina ao final da fila de digitalização.

Se precisar de remover todas as lâminas da fila clique em **Empty Queue** (esvaziar fila) na janela principal do Scan Control.

### Passo 7. Digitalize as suas lâminas

- 1 Se necessário, na janela principal do Scan Control, clique em **Close Door** (fechar porta).  
Espere até a porta fechar e o botão **Start Scan** (iniciar digitalização) ficar disponível.
- 2 Na janela principal do Scan Control clique em **Start Scan** (iniciar digitalização) para começar a digitalizar as lâminas que foram adicionadas à fila.

### Passo 8. Remova as lâminas

- 1 Na janela principal do programa Scan Control clique em **Open Door** (abrir porta) para abrir a porta do scanner.
- 2 Abra a porta do scanner e retire os suportes de lâminas da cassete.
- 3 Remova as lâminas dos suportes de lâminas, da seguinte forma:
  - a Pegue no suporte de lâmina pelos lados, com o logotipo Agilent virado para cima.
  - b Abra a tampa plástica transparente empurrando a extremidade com a aba suavemente para dentro e puxando para cima.
  - c Pela parte inferior do suporte de lâmina, empurre a extremidade com o código de barras para cima, para evitar impressões digitais na área da amostra.
  - d Pegue na lâmina pelos lados e remova-a do suporte de lâmina.

## Instrucțiuni în limba română

### Simboluri de siguranță pe scanner



#### Simbolul PERICOL DE PRINDERE A MĂINII

Acest simbol este amplasat pe produs în locul în care există riscul de prindere a mâinilor sau a degetelor. Țineți mâinile departe de componentele în mișcare din această zonă.

### Instrucțiuni de siguranță

Scannerul SureScan Dx este proiectat pentru a fi utilizat cu ușurință și în condiții de siguranță. Asigurați-vă că înțelegeți și că identificați toate avertismentele și atenționările înainte de acționarea scannerului SureScan Dx.



#### AVERTISMENT

Nu încercați să reparați sau să accesați componentele interne ale scannerului SureScan Dx. Riscați să fiți expus la tensiuni înalte și la radiații laser dăunătoare. Îndepărtarea capacului principal conduce la anularea garanției.



#### AVERTISMENT

Conectați scannerul SureScan Dx la o priză de perete cu împământare. Aceasta asigură protecție și siguranță în exploatare.



#### ATENȚIE

Instalați scannerul pe un banc de lucru sau pe o masă de laborator solidă pentru a minimiza vibrațiile produse de scanarea rapidă a lamelor de micromatrice. Nu instalați scannerul în apropierea altor echipamente de laborator care ar putea produce vibrații.



#### ATENȚIE

Scannerul SureScan Dx este sensibil la condiții de umiditate și condens. Respectați măsurile de precauție furnizate în documentația produsului. Consultați „Condiții de umiditate” de la pagina 259.

## Condiții de umiditate

Scannerul SureScan Dx este sensibil la condiții de umiditate și condens. Întotdeauna, lăsați să treacă timpul de echilibrare termică de 12 ore la locul amplasării înainte de a deschide cutia de transport.

Pentru a asigura o performanță optimă, acționați scannerul SureScan Dx numai în următorul interval de umiditate.

Funcționare: de la 15% la 85% RH la 30 °C

## Instrucțiuni de operare

### Pasul 1. Pornirea scannerului de micromatrice SureScan Dx și a programului Scan Control (Control scanare)

- 1 Se pornește scannerul SureScan Dx cu ajutorul butonului de pornire situat pe partea frontală a instrumentului.
- 2 Se pornește unitatea centrală a computerului și se așteaptă ca aceasta să încarce sistemul de operare.
- 3 Se face dublu click pe pictograma **Agilent Microarray Scan Control** (Control scanare micromatrice Agilent) pentru a porni programul Scan Control (Control scanare).



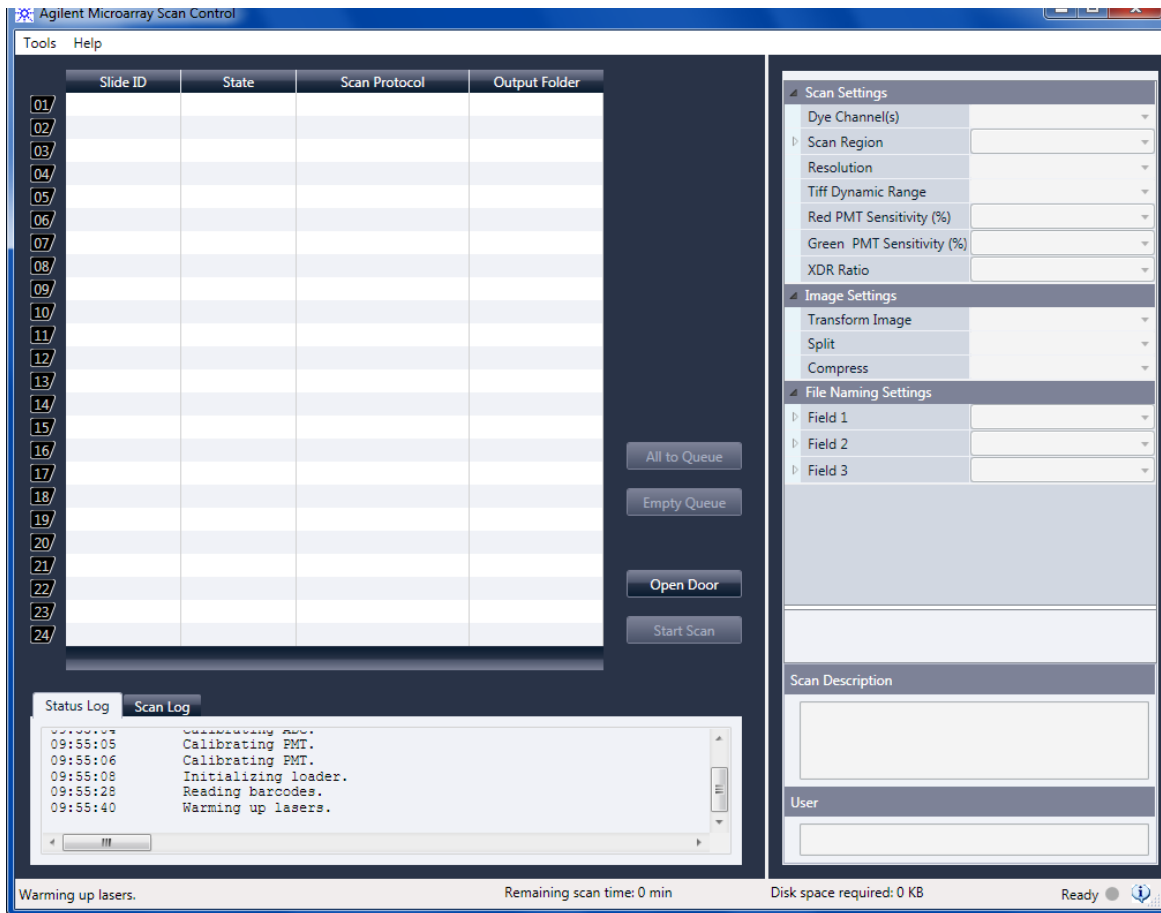
**Figura 36** Pictograma Agilent Microarray Scan Control (Control scanare micromatrice Agilent)

Când programul Agilent Microarray Scan Control (Control scanare micromatrice Agilent) pornește, se deschide fereastra principală a acestuia, iar scannerul efectuează secvența de inițializare. După finalizarea secvenței de inițializare, butonul Open Door (Deschidere ușă) se activează și se pot încărca lamele de micromatrice. Consultați [Figura 37](#) de la pagina 260.

### NOTĂ

Dacă sunt încărcate 24 de lame de micromatrice în scanner, atunci când acesta va fi pornit, inițializarea nu va reuși, deoarece scannerul nu poate efectua ciclul de scoatere a lamelor de micromatrice.

## 7 Basic Instructions for Use Instrucțiuni de operare



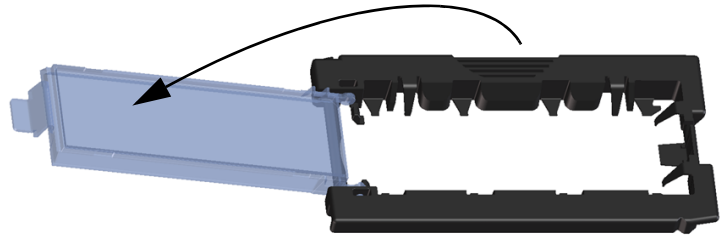
**Figura 37** Fereastra programului Agilent Microarray Scan Control (Control scanare micromatrice Agilent) – pregătită pentru adăugarea lamelor de micromatrice.

Statusul scannerului este indicat în colțul din dreapta jos al ferestrei Scan Control (Control scanare).

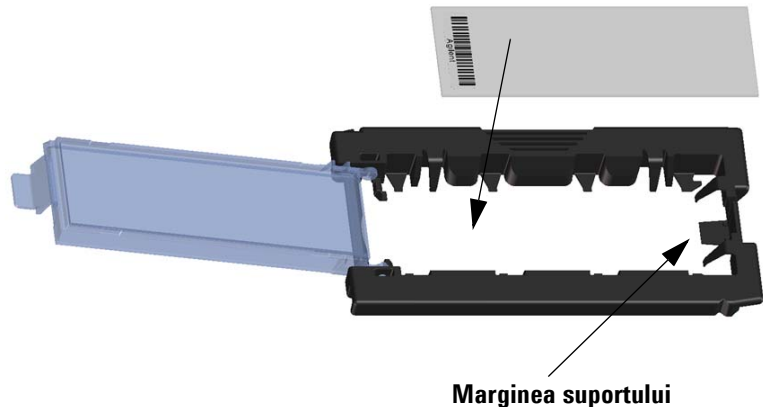
*Amprentele digitale pot cauza erori în timpul scanării. Atingeți numai marginile lamelor de micromatrice și purtați întotdeauna mănuși atunci când acestea sunt manipulate.*

## Pasul 2. Introducerea lamelor de micromatrice în suporturile destinate acestora (slide holders)

- 1 Se amplasează suportul pentru lame pe o suprafață netedă, cu capacul transparent orientat în sus și cu clapeta în partea dreaptă. Acest lucru ajută la orientarea corespunzătoare a lamelor de micromatrice atunci când se introduc în suportul destinat.
- 2 Se apasă ușor clapeta și se ridică capacul transparent din plastic pentru a-l deschide.



**Figura 38** Deschiderea suportului pentru lamele de micromatrice



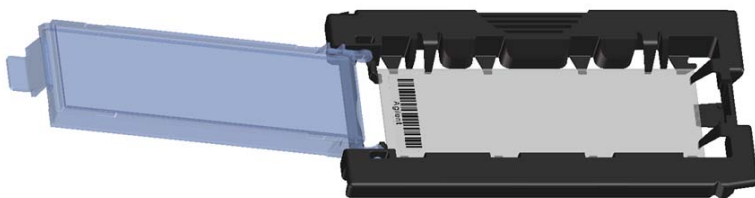
**Figura 39** Introducerea lamelor de micromatrice în suport

- 3 Lamele de micromatrice se introduc în suport astfel:
  - a Se ține lama de capătul care prezintă codul de bare.
  - b Asigurați-vă că suprafața activă a micromatricei este orientată în sus (Consultați Figura 42), către capacul transparent al suportului, cu codul de bare în partea stângă.
  - c Se poziționează cu atenție capătul fără etichetă al lamei de micromatrice pe marginea suportului. Consultați Figura 39.
  - d Se coboară ușor lama în suport. Consultați Figura 40.
  - e Se închide capacul de plastic al suportului, apăsând pe clapetă până când se aude „click”. Această acțiune poziționează corect lama de micromatrice în suport.
  - f Se împinge ușor și se ridică clapeta suportului pentru a-l redeschide și a verifica dacă lama este poziționată corect. După introducere, lama este poziționată orizontal și aliniată corespunzător cu puntele de ghidare de pe suportul pentru lame.
  - g Se închide capacul de plastic pentru lame, apăsând pe clapetă până când se aude „click”. Consultați Figura 41.

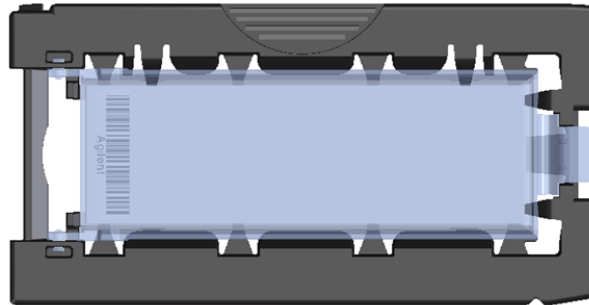


**ATENȚIE**

În cazul în care clapeta suportului pentru lame este prea întinsă, este posibil ca fixarea să nu fie corespunzătoare. Aruncați suporturile pentru lame care nu se mai fixează în poziție atunci când le închideți.



**Figura 40** Lama de micromatrice poziționată corect în suportul pentru lame (deschis)



**Figura 41** Lama de micromatrice poziționată corect în suportul pentru lame (închis)

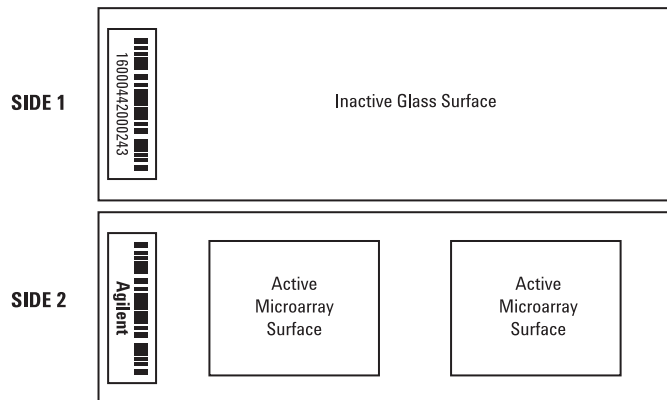
Lamele de micromatrice Agilent prezintă două coduri de bare, câte unul pe fiecare parte. Consultați [Figura 42](#). Poziționați suprafața activă a lamei de micromatrice către capacul transparent al suportului pentru lame.



**ATENȚIE**

Un suport cu lama introdusă incorect poate deteriora scannerul SureScan Dx.

**Double-barcoded slide example**



**Figura 42** Orientarea lamei de micromatrice

### Pasul 3. Încărcarea suporturilor pentru lame în caseta scannerului

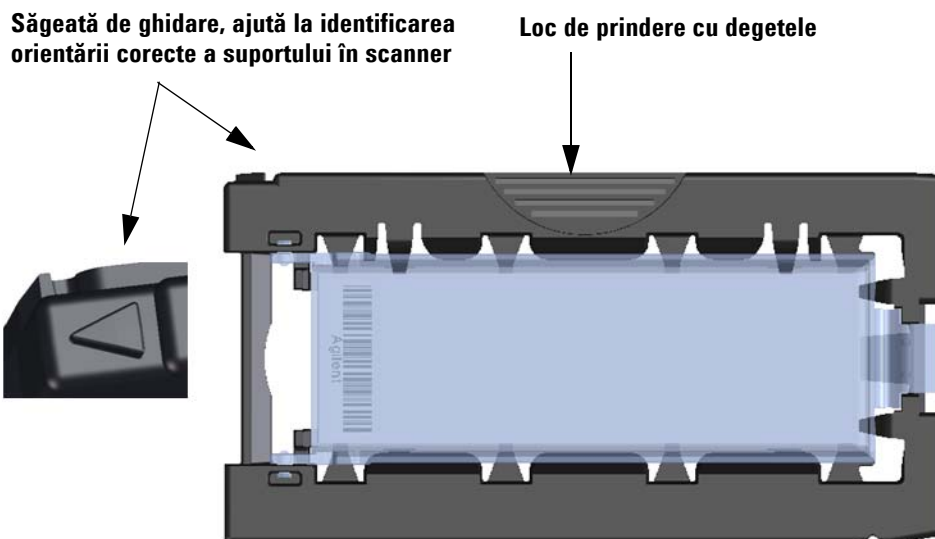
- 1 În fereastra programului Scan Control (Control scanare), se face click pe butonul **Open Door** (Deschidere ușă) pentru a deschide ușa scannerului.



#### ATENȚIE

Modul corect de a deschide ușa scannerului este prin utilizarea butonului Open Door (Deschidere ușă) din programul Scan Control (Control scanare). Nu încercați să deschideți ușa manual.

- 2 Pentru încărcare în scanner, se apucă suportul pentru lame numai de zona marcată. Orientarea suportului pentru lame în vederea introducerii corecte în scanner este indicată de săgeata din colțul stâng al suportului. Consultați [Figura 43](#).



**Figura 43** Suportul pentru lame cu elementele de orientare pentru introducerea corectă a lamelor de micromatrice în scanner



Introduceți un suport pentru lame în orice poziție disponibilă. Numerele pozițiilor sunt etichetate clar pe caseta scannerului. Nu forțați suportul pentru lame la introducerea în casetă. Acesta se introduce ușor dacă este aliniat corespunzător, cu zona de prindere cu degetele în partea de sus, iar săgeata este orientată spre stânga.



**Figura 44** Introducerea suportului pentru lame în casetă

- 3 Asigurați-vă că suportul pentru lame este amplasat în partea inferioară a slotului din casetă.  
Numărul slotului corespunzător poziției în care a fost încărcată lama de micromatrice clipește intermitent cu albastru, în fereastra software-ului Scan Control (Control Scanare).
- 4 Se repetă pașii 2 și 3 până când toate suporturile pentru lame sunt încărcate în casetă.



**ATENȚIE**

Amplasarea incorectă a suportului pentru lame în casetă poate conduce la deteriorarea gravă a scannerului de micromatrice SureScan Dx.

- 5 În programul Scan Control (Control scanare), se face click pe **Close Door** (Închidere ușă).

Pentru lamele de micromatrice care nu au un protocol de scanare presetat corespunzător designului lor, protocolul de scanare rămâne necompletat, iar statusul slotului rămâne activ cu mențiunea „Present” (Prezent). Atribuiți un protocol de scanare, după cum este descris în „Pasul 4. Setarea sau modificarea setărilor pentru protocolul de scanare”.

*Setările curente pentru protocolul de scanare sunt afișate pentru fiecare lamă de micromatrice selectată în panoul din dreapta al ferestrei principale a software-ului Scan Control (Control scanare).*

<b>AgilentHD_GX_2Color</b>	Micromatrice Agilent HD pentru studiul expresiei genice, utilizând marcarea cu 2 culori
<b>AgilentHD_GX_1Color</b>	Micromatrice Agilent HD pentru studiul expresiei genice, utilizând marcarea cu o culoare
<b>AgilentG3_GX_2Color</b>	Micromatrice Agilent G3 pentru studiul expresiei genice, utilizând marcarea cu 2 culori
<b>AgilentG3_GX_1Color</b>	Micromatrice Agilent G3 pentru studiul expresiei genice, utilizând marcarea cu o culoare
<b>AgilentHD_CGH</b>	Micromatrice Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Micromatrice Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Micromatrice Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Micromatrice Agilent G3 miRNA

#### **Pasul 4. Setarea sau modificarea setărilor pentru protocolul de scanare**

Prima dată când se configurează protocolul de scanare al unei lame de micromatrice, se selectează un protocol de scanare corespunzător.

- Pentru fiecare lamă din tabelul de sloturi, se face click pe butonul Scan Protocol (Protocol scanare) și se selectează un protocol de scanare corespunzător pentru scanarea lamei respective. Agilent furnizează opt protocoale presetate pentru a fi utilizate cu lamele de micromatrice Agilent High Density (HD) și cu lamele de micromatrice Agilent G3.

#### **Pasul 5. (Opțional) Modificarea directorului pentru salvarea datelor**

Se poate modifica directorul specificat, în care programul salvează fișierele imagine create de scanner.

- Pentru fiecare poziție din tabelul de sloturi pentru lame, se face click pe Output Folder (Director de salvare) și se navighează la locația directorului dorit. Agilent recomandă selectarea unui Director local de pe o unitate de hard disk secundară.

#### **Pasul 6. Adăugarea lamelor de micromatrice în lista de așteptare a scanărilor**

- 1 În fereastra principală Scan Control (Control scanare), se face click pe butonul **All to Queue** (Toate în lista de așteptare) pentru a adăuga toate lamele de micromatrice pregătite pentru scanare, din tabelul de sloturi, în lista de așteptare. Toate lamele de micromatrice din tabelul de sloturi pregătite pentru scanare, au mențiunea „Ready for queue”. Va apărea o fereastră de dialog de confirmare. Se face click pe butonul **Yes** (Da) pentru a adăuga lamele de micromatrice în lista de așteptare.

SAU

În tabelul de sloturi Scan Control (Control scanare), se selectează celula **State** (Status) pentru prima poziție de scanat și se face click pe butonul **Add to Queue** (Adăugare în lista de așteptare).

2 Pentru fiecare poziție suplimentară de scanat:

- Se face click pe butonul **State** (Status) și se selectează **Add to queue first** (Adăugarea în prima poziție a listei de așteptare) pentru a adăuga lama de micromatrice respectivă în prima poziție a listei de așteptare pentru scanare.

SAU

- Se face click pe butonul **State** (Status) și se selectează **Add to queue last** (Adăugarea în ultima poziție a listei de așteptare) pentru a adăuga lama de micromatrice respectivă în ultima poziție a listei de așteptare pentru scanare.

Pentru eliminarea tuturor pozițiilor din lista de așteptare, se face click pe butonul **Empty Queue** (Golire listă de așteptare) din fereastra principală a software-ului Scan Control (Control scanare).

### Pasul 7. Scanarea lamelor de micromatrice

- 1 Dacă este necesar, în fereastra principală Scan Control (Control scanare), se face click pe **Close Door** (Închidere ușă). Se așteaptă până când se închide ușa și se activează butonul **Start Scan** (Pornire scanare).
- 2 În fereastra principală Scan Control (Control scanare), se face click pe **Start Scan** (Pornire scanare) pentru a începe scanarea lamelor de micromatrice adăugate în lista de așteptare.

### Pasul 8. Scoaterea lamelor de micromatrice din scannerul Sure Scan Dx

- 1 În fereastra principală Scan Control (Control scanare), se face click pe butonul **Open Door** (Deschidere ușă) pentru a deschide ușa scannerului.
- 2 Se deschide ușa scannerului și se scot suporturile pentru lame din casetă.
- 3 Se scot lamele din suporturi astfel:
  - a Se ține suportul pentru lame din părțile laterale, cu sigla Agilent orientată în sus.
  - b Se apasă ușor și se ridică clapeta suportului pentru a-l deschide.
  - c Se împinge în sus capătul lamei de micromatrice care prezintă codul de bare, pentru a evita lăsarea de amprente digitale pe suprafața micromatricei.
  - d Se prinde lama din părțile laterale și se scoate din suport.

## Slovenské pokyny

### Bezpečnostné symboly na skeneri



#### Symbol NEBEZPEČENSTVA POMLIAŽDENIA

Tento symbol je umiestnený na produkte na mieste, kde hrozí nebezpečenstvo pomliaždenia rúk alebo prstov. V tejto časti držte ruky v dostatočnej vzdialenosti od pohyblivých súčastí.

### Bezpečnostné pokyny

Skener SureScan Dx je určený na bezpečné a jednoduché používanie. Pred použitím skenera SureScan Dx musíte pochopiť a dodržiavať všetky varovania a výstrahy.



#### VAROVANIE

**Nepokúšajte sa opraviť vnútorné súčasti skenera SureScan Dx ani k nim získať prístup. Hrozí riziko vystavenia sa vysokému napätiu a škodlivému laserovému žiareniu. Odobratie hlavného krytu bude mať za následok neplatnosť záruky.**



#### VAROVANIE

**Skener SureScan Dx zapojte do uzemnenej elektrickej zásuvky. Ochranné uzemnenie sa využíva z dôvodu bezpečnosti.**



#### VÝSTRAHA

S cieľom minimalizovať vibrácie v dôsledku rýchleho skenovania laserovej excitácie cez microarray čipy umiestnite skener na stabilnú laboratórnu lavicu alebo stôl. Skener neumiestňujte v blízkosti iného laboratórneho zariadenia, ktoré by mohlo spôsobiť vibrácie.



#### VÝSTRAHA

Skener SureScan Dx je citlivý na vlhkosť podmienky s kondenzáciou. Dodržiavajte bezpečnostné opatrenia uvedené v dokumentácii produktu. Pozrite si časť **“Vlhkosť podmienky”** na str. 269.

## Vlhkostné podmienky

Skener SureScan Dx je citlivý na vlhkostné podmienky s kondenzáciou. Pred otvorením prepravnej škatule na pracovisku vždy nechajte zariadenie nadobudnúť tepelnú rovnováhu počas 12 hodín.

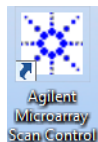
V záujme optimálneho výkonu prevádzkujte skener SureScan Dx iba v prostredí s nasledujúcim rozsahom vlhkosti.

Prevádzka: relatívna vlhkosť 15 % až 85 % pri teplote 30 °C

## Prevádzkové pokyny

### Krok č. 1. Zapnutie skenera SureScan Dx pre microarray čipy a spustenie programu Scan Control (Riadenie skenovania)

- 1 Skener SureScan Dx zapnite pomocou vypínača na prednej strane prístroja.
- 2 Zapnite počítač a počkajte na spustenie operačného systému.
- 3 Dvojitým kliknutím na ikonu **Agilent Microarray Scan Control** (Riadenie skenovania microarray čipov od spoločnosti Agilent) spustíte program Scan Control (Riadenie skenovania).



**Obrázok 36** Ikona Agilent Microarray Scan Control (Riadenie skenovania microarray čipov od spoločnosti Agilent)

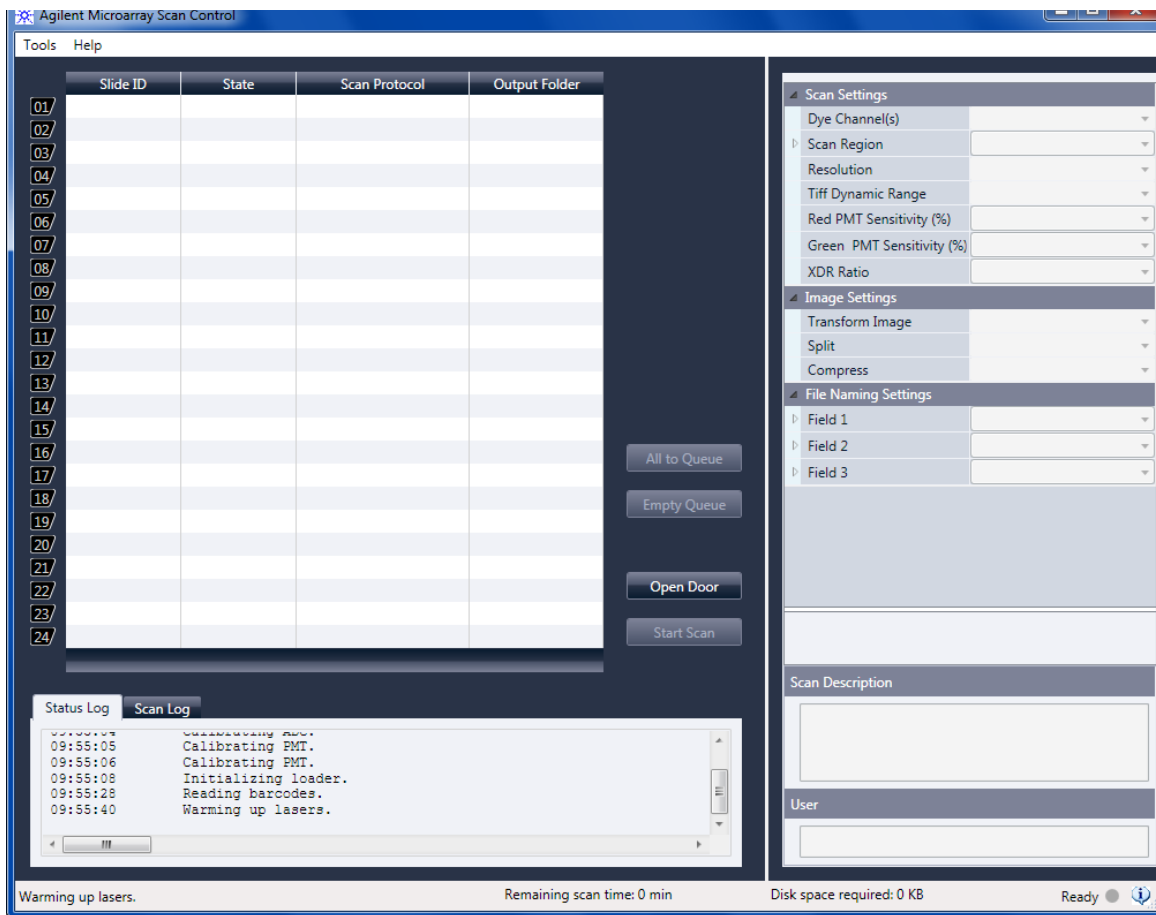
Po spustení programu sa otvorí hlavné okno programu Agilent Microarray Scan Control (Riadenie skenovania microarray čipov od spoločnosti Agilent) a skener vykoná inicializačnú sekvenciu. Po dokončení inicializačnej sekvencie sa aktivuje tlačidlo Open Door (Otvoriť dverka) a môžete vložiť sklíčka. Pozrite si [Obrázok 37](#) na str. 270.

### POZNÁMKA

Ak je v skeneri pri zapnutí zavedených 24 sklíčok, inicializácia zlyhá, pretože nebude možné vykonať cyklus vysunutia sklíčok.

## 7 Basic Instructions for Use

### Prevádzkové pokyny



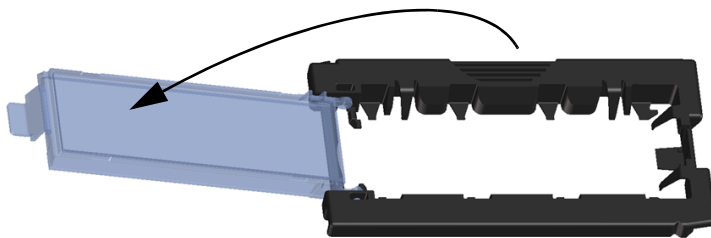
**Obrázok 37** Okno programu Agilent Microarray Scan Control (Riadenie skenovania microarray čipov od spoločnosti Agilent) – pripravené na pridávanie sklíčok.

Stav skenera sa zobrazuje v pravom dolnom rohu okna Scan Control (Riadenie skenovania) v stavovom riadku.

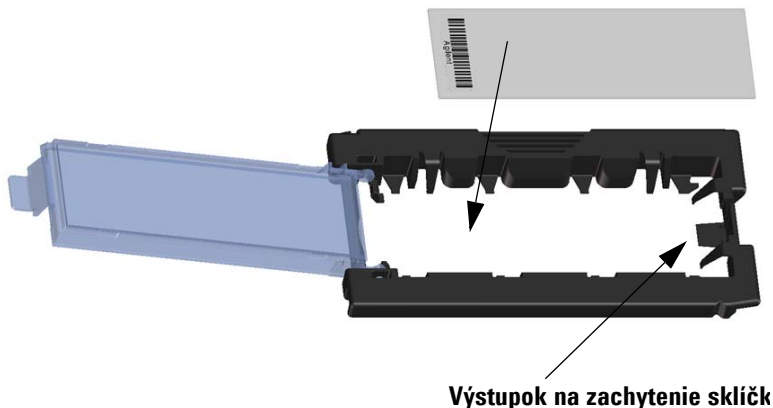
*Odtlačky prstov spôsobujú chyby pri detekcii fluorescencie.  
Dotýkajte sa iba okrajov sklíčka a pri manipulácii so sklíčkami vždy používajte rukavice.*

## Krok č. 2. Vloženie sklíčok do držiakov sklíčok

- 1 Pred vložení sklíčka položte držiak sklíčka na rovný povrch priesvitným krytom smerom nahor a západkou vpravo. To vám pomôže zabezpečiť správne zarovnanie sklíčka pri vkladaní do držiaka sklíčka.
- 2 Otvorte jemným zatlačením a vytiahnutím za koniec priesvitného plastového krytu so západkou.



**Obrázok 38** Otvorenie držiaka sklíčka



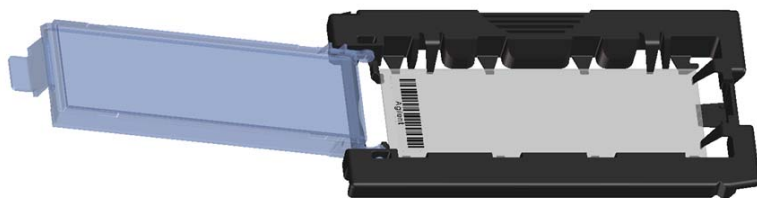
**Obrázok 39** Vloženie sklíčka do držiaka sklíčka

- 3 Sklíčko vložte do držiaka nasledujúcim spôsobom:
- a Sklíčko držte za koniec s čiarovým kódom.
  - b Uistite sa, že aktívny povrch microarray čipu smeruje hore ku krytu sklíčka s čiarovým kódom umiestneným vľavo.
  - c Opatrne položte koniec sklíčka bez štítku s čiarovým kódom na výstupok na zachytenie sklíčka. Pozrite si [Obrázok 39](#).
  - d Jemne zasuňte sklíčko dole do držiaka sklíčka. Pozrite si [Obrázok 40](#).
  - e Plastový kryt sklíčka zatvorte zatláčaním konca so západkou, kým nezačujete cvaknutie. Sklíčko sa tým posunie do správnej polohy v držiaku.
  - f Ak chcete držiak znova otvoriť a overiť, či je sklíčko správne umiestnené, jemne zatlačte a vytiahnite koniec priesvitného plastového krytu so západkou.  
Po vložení je sklíčko umiestnené rovno a zodpovedá bodom zarovnania na držiaku sklíčka.
  - g Plastový kryt sklíčka zatvorte zatláčaním konca so západkou, kým nezačujete cvaknutie. Pozrite si [Obrázok 41](#).



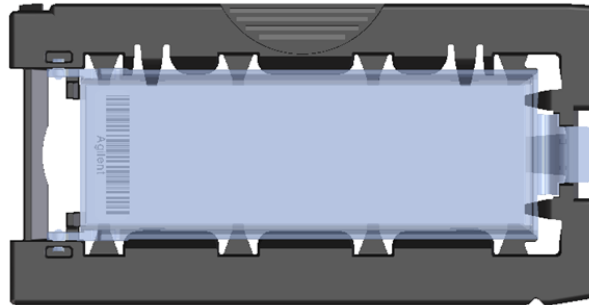
#### VÝSTRAHA

Ak je západka na plastovom kryte sklíčka príliš napnutá, nemusí správne zacvaknúť na miesto. Držiaky sklíčok, ktoré pri zatváraní nezacvaknú, zlikvidujte.



**Obrázok 40** Sklíčko vložené do držiaka sklíčka





**Obrázok 41** Držiak sklíčka – zatvorený, so sklíčkom

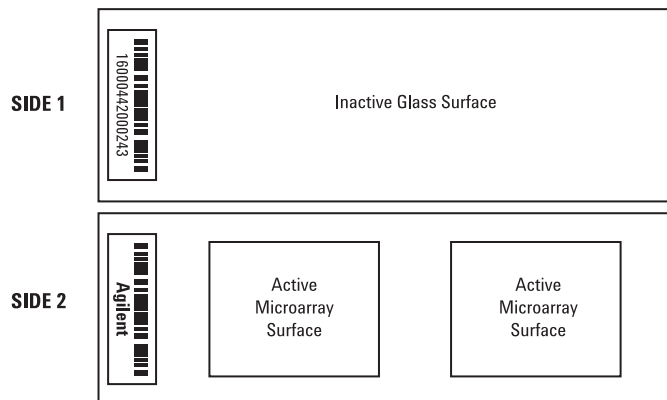
Sklíčka od spoločnosti Agilent majú dva čiarové kódy, jeden na každej strane skla. Pozrite si **Obrázok 42**. Položte stranu s aktívnym povrchom microarray sklíčka smerom ku krytu držiaka sklíčka.



**VÝSTRAHA**

Nesprávne vložené sklíčko môže poškodiť skener SureScan Dx.

**Double-barcoded slide example**



**Obrázok 42** Orientácia sklíčka

### Krok č. 3. Vkládanie držiakov sklíčok do zásobníka

- 1 V okne programu Scan Control (Riadenie skenovania) kliknutím na položku **Open Door** (Otvoriť dverka) otvorte dverka skenera.



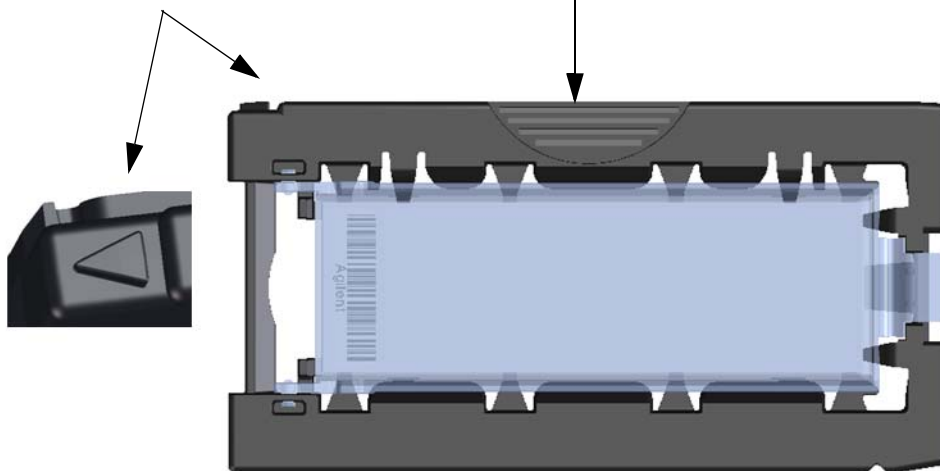
#### VÝSTRAHA

Správny spôsob otvorenia dveriek skenera je použitie tlačidla Open Door (Otvoriť dverka) v programe Scan Control (Riadenie skenovania). Nepokúšajte sa otvoriť dverka manuálne.

- 2 Uchopte a zdvihnite držiak za vyznačený výčnelok. Keď držiak sklíčka zdvihnete správne, šípka v hornej časti držiaka sklíčka smeruje doľava. Pozrite si [Obrázok 43](#).

Šípka uľahčuje identifikáciu orientácie skenera

Výčnelok určený na uchopenie držiaka



**Obrázok 43** Držiak sklíčka vám pomôže vložiť sklíčka správne

Držiak sklíčka vložte do ktorejkoľvek otvorenej drážky. Číslo drážok sú na zásobníku pre sklíčka zreteľne označené. Držiak sklíčka nezatláčajte do zásobníka nasilu. Držiak sa vkladá ľahko, keď je správne umiestnený výčnelkom na uchopenie nahor a šípka smeruje doľava.



**Obrázok 44** Vloženie držiaka sklíčka do zásobníka

- 3 Uistite sa, že držiak sklíčka je umiestnený v dolnej časti drážky zásobníka.  
Číslo drážky so zavedeným sklíčkom bliká namodro.
- 4 Opakujte kroky č. 2 až 3, kým nebudú do zásobníka umiestnené všetky držiaky sklíčok.



#### VÝSTRAHA

Nesprávne umiestnenie držiaka sklíčka do zásobníka môže mať za následok vážne poškodenie microarray skenera SureScan Dx.

- 5 V programe Scan Control (Riadenie skenovania) kliknite na položku **Close Door** (Zatvoriť dverka).

V prípade sklíčok, ktoré nemajú k svojmu dizajnu priradený skenovací protokol, zostáva skenovací protokol prázdny a políčko State (Stav) drážky ostáva označené ako „Present“ (Doterajšie). Priradte skenovací protokol podľa opisu v časti [“Krok č. 4. Nastavenie alebo zmena nastavení skenovacieho protokolu”](#).

*Aktuálne nastavenia skenovacieho protokolu sú zobrazené pre každé vybrané sklíčko v pravej časti okna v hlavnom okne softvéru Scan Control (Riadenie skenovania).*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-farebné microarray čipy na génovú expresiu
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-farebné microarray čipy na génovú expresiu
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-farebné microarray čipy na génovú expresiu
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-farebné microarray čipy na génovú expresiu
<b>AgilentHD_CGH</b>	Agilent HD microarray čipy na CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Agilent G3 microarray čipy na CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Agilent HD miRNA microarray čipy
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA microarray čipy

#### Krok č. 4. Nastavenie alebo zmena nastavení skenovacieho protokolu

Pri prvom nastavení skenovania sklíčka vyberte skenovací protokol, ktorý sa má použiť.

- Pre každé sklíčko v tabuľke s drážkami kliknite na položku Scan Protocol (Skenovací protokol) a vyberte skenovací protokol, ktorý sa má použiť na skenovanie sklíčka.

Spoločnosť Agilent dodáva osem vopred nainštalovaných protokolov, ktoré je možné zvoliť a použiť s Agilent čipmi s vysokou hustotou (HD) a s Agilent čipmi G3.

#### Krok č. 5. (Voliteľný) Zmena výstupného priečinka

Zadaný výstupný priečinok, do ktorého program ukladá obrazové súbory vytvorené skenerom, môžete zmeniť.

- Pre každé sklíčko v tabuľke s drážkami kliknite na položku Output Folder (Výstupný priečinok) a vyhľadajte umiestnenie požadovaného priečinka.

Spoločnosť Agilent odporúča výber lokálneho priečinka na sekundárnom pevnom disku.

#### Krok č. 6. Určenie poradia skenovania sklíčok

- 1 V hlavnom okne programu Scan Control (Riadenie skenovania) kliknutím na položku **All to Queue** (Všetky do poradia) pridajte všetky sklíčka v tabuľke s drážkami, ktorých políčko State (Stav) je označené ako „Ready for queue“ (Pripravené), do poradia na skenovanie.

Zobrazí sa potvrdzovacie dialógové okno. Kliknutím na položku **Yes** (Áno) pridáte sklíčka do poradia.

ALEBO

V tabuľke s drážkami programu Scan Control (Riadenie skenovania) kliknite na bunku **State** (Stav) sklíčka, ktoré chcete skenovať ako prvé. Potom kliknite na položku **Add to Queue** (Pridať do poradia).

- 2 Pri každom ďalšom sklíčku, ktoré chcete skenovať,
  - kliknite na bunku **State** (Stav) a výberom položky **Add to queue first** (Pridať do poradia ako prvé) pridajte sklíčko na začiatok poradia skenovania.

ALEBO

- kliknite na bunku **State** (Stav) a výberom položky **Add to queue last** (Pridať do poradia ako posledné) pridajte sklíčko na koniec poradia skenovania.

Ak chcete odstrániť všetky sklíčka z poradia, kliknite na položku **Empty Queue** (Zrušiť poradie) v hlavnom okne programu Scan Control (Riadenie skenovania).

### Krok č. 7. Skenovanie sklíčok

- 1 V prípade potreby v hlavnom okne programu Scan Control (Riadenie skenovania) kliknite na položku **Close Door** (Zatvoriť dverka).

Počkajte, kým sa dverka nezatvorí a neaktivuje sa tlačidlo **Start Scan** (Spustiť skenovanie).

- 2 V hlavnom okne programu Scan Control (Riadenie skenovania) kliknutím na položku **Start Scan** (Spustiť skenovanie) začnete skenovanie sklíčok, ktoré boli pridané do poradia.

### Krok č. 8. Vybratie sklíčok

- 1 V hlavnom okne programu Scan Control (Riadenie skenovania) kliknutím na položku **Open Door** (Otvoriť dverka) otvorte dverka skenera.

- 2 Po otvorení dverok skenera vyberte držiaky sklíčok zo zásobníka.

- 3 Sklíčka vyberte z držiakov sklíčok nasledujúcim spôsobom:

- a Držte držiak sklíčka na bočných stranách s logom spoločnosti Agilent smerom nahor.
- b Otvorte jemným zatlačením a vytiahnutím za koniec priesvitného plastového krytu so západkou.
- c Sklíčko vytlačte za koniec s čiarovým kódom zospodu držiaka sklíčka, aby ste predišli odtlačkom prstov na časti so vzorkou.
- d Uchopte sklíčko za bočné strany a vyberte z držiaka sklíčka.

## Navodila v angleščini

### Varnostni simboli na optičnem bralniku



#### Simbol NEVARNOST UKLEŠČENJA

Ta simbol je postavljen na točki izdelka, kjer obstaja nevarnost ukleščanja rok ali prstov. Rok ne približujte premikajočim se delom v tem območju.

### Varnostni napotki

Optični bralnik SureScan Dx je zasnovan za varno in preprosto uporabo. Pred uporabo optičnega bralnika SureScan DX morate razumeti in upoštevati vsa opozorila.



#### OPOZORILO

Ne poskušajte popravljati ali dostopati do notranjih komponent optičnega bralnika SureScan Dx. Če to naredite, tvegate izpostavljenost visoki napetosti in škodljivemu laserskemu sevanju. Z odstranjevanjem glavnega pokrova izničite garancijo.



#### OPOZORILO

Optični bralnik SureScan DX povežite z ozemljeno vtičnico. Za varnost je potrebna zaščitna ozemljitev.



#### POZOR

Da bi zmanjšali količino tresljajev zaradi hitrega laserskega optičnega branja, optični bralnik namestite na trdno laboratorijsko ali običajno mizo. Optičnega bralnika ne nameščajte v bližino druge laboratorijske opreme, ki lahko povzroča tresljaje.



#### POZOR

Optični bralnik SureScan Dx je občutljiv na vlažne pogoje s kondenzacijo. Upoštevajte napotke v dokumentaciji izdelka. Glejte »Vlažni pogoji« na strani 279.

## Vlažni pogoji

Optični bralnik SureScan Dx je občutljiv na vlažne pogoje s kondenzacijo. Pred odpiranjem embalaže na mestu uporabe vedno počakajte 12 ur, da se naprava prilagodi temperaturi.

Da bi zagotovili optimalno delovanje, optični bralnik SureScan Dx uporabljajte le v naslednjem razponu vlažnosti.

Med delovanjem: od 15 do 85 % relativne vlažnosti pri 30 °C

## Navodila za uporabo

### 1. korak Vključite optični bralnik SureScan Dx Microarray in zaženite program nadzora optičnega branja

- 1 Vključite optični bralnik SureScan Dx s stikalom za vklop/izklop na sprednji strani naprave.
- 2 Vključite računalniško delovno postajo in počakajte, da se zažene.
- 3 Za zagon programa nadzora optičnega branja dvokliknite ikono **Agilent Microarray Scan Control** (Nadzor optičnega branja Agilent Microarray).



**Slika 36** Ikona za nadzor optičnega branja Agilent Microarray

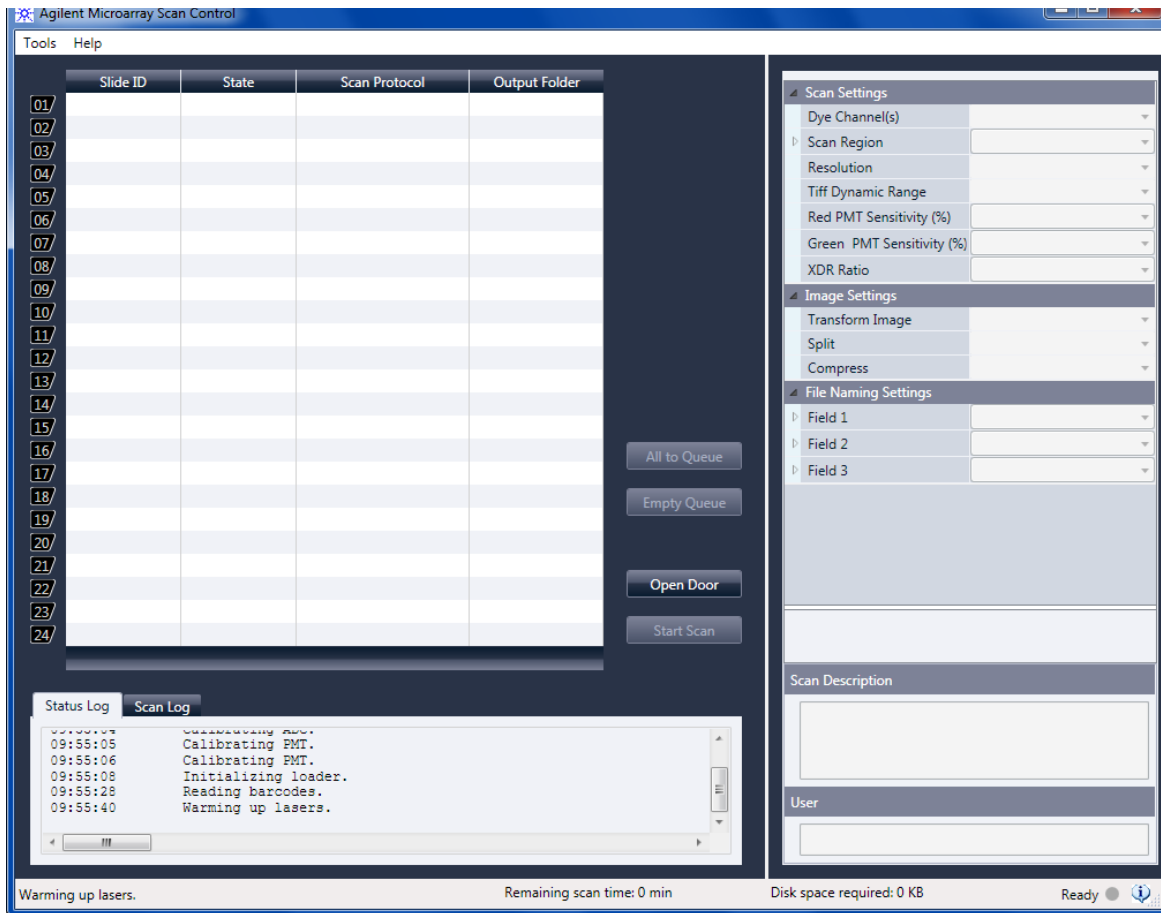
Ko se program zažene, se odpre glavno okno programa za nadzor optičnega branja Agilent Microarray in optični bralnik opravi inicializacijsko zaporedje. Po koncu inicializacije se omogoči gumb za odpiranje vrat in lahko naložite objektna stekla. Glejte [Slika 37](#) na strani 280.

### OPOMBA

Če je v optični bralnik ob vklopu naloženih 24 objektnih stekel, inicializacija ne bo uspela, ker ne more izvesti cikla izvrženja objektnega stekla.

## 7 Basic Instructions for Use

### Navodila za uporabo



**Slika 37** Okno programa nadzora optičnega bralnika Agilent Microarray – pripravljeno za dodajanje objektnih stekel.

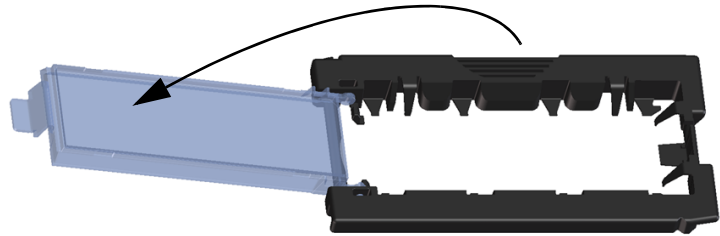
Stanje optičnega bralnika je prikazano v desnem spodnjem kotu okna za nadzor optičnega bralnika, v vrstici stanja.



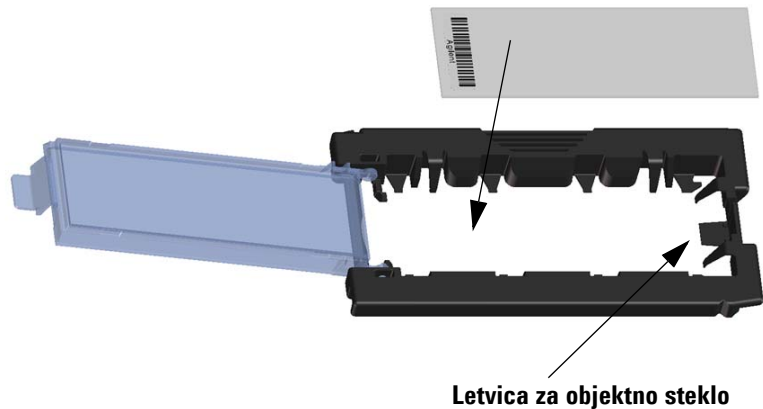
*Prstni odtisi povzročajo napake v zaznavanju fluorescence. Dotikajte se le robov objektnega stekla in pri delu z objektnimi stekli vedno uporabljajte rokavice.*

## 2. korak Vstavite objektna stekla v držalo

- 1 Pred vstavitvijo objektnega stekla postavite držalo na ravno površino tako, da je prozorni pokrov obrnjen navzgor, jeziček pa na desni. Tako zagotovite pravilno poravnano objektnega stekla, ko ga vstavite v držalo.
- 2 Del prozornega plastičnega pokrova z jezičkom previdno potisnite in povlecite navzgor, da ga odprete.



**Slika 38** Odpiranje držala za objektna stekla



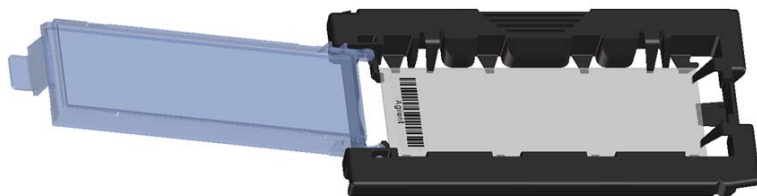
**Slika 39** Vstavljanje objektnega stekla v držalo

- 3 Vstavite objektno steklo v držalo na naslednji način:
- a Držite objektno steklo na koncu s črtno kodo.
  - b Prepričajte se, da je površina aktivne mikromreže obrnjena navzgor, proti pokrovu za objektna stekla, črtna koda mora biti na levi strani.
  - c Previdno postavite konec objektnega stekla brez črtno koda na letvico za objektno steklo. Glejte [Slika 39](#).
  - d Previdno spustite objektno steklo v držalo. Glejte [Slika 40](#).
  - e Zaprite plastični pokrov za objektno steklo tako, da pritisnete na konec jezička, dokler ne slišite »klika«. S tem premaknete objektno steklo v pravilni položaj v držalu.
  - f Del prozornega plastičnega pokrova z jezičkom previdno potisnite in povlecite navzgor, da ga znova odprete in preverite, ali je objektno steklo pravilno nameščeno.  
Ko je objektno steklo vstavljeno, leži plosko in se ujema s točkami poravnave na držalu.
  - g Zaprite plastični pokrov za objektno steklo tako, da pritisnete na konec jezička, dokler ne slišite »klika«. Glejte [Slika 41](#).

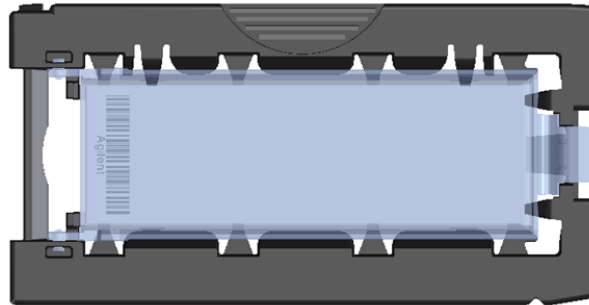


**POZOR**

Če jeziček na plastičnem pokrovu objektnega stekla prevleč povlečete, se morda ne bo pravilno zaskočil. Držala objektnih stekel, ki ne kliknejo, ko jih zaprete, zavrzite.



**Slika 40** Objektno steklo, vstavljeno v držalo



**Slika 41** Držalo za objektno steklo – zaprto z objektnim steklom

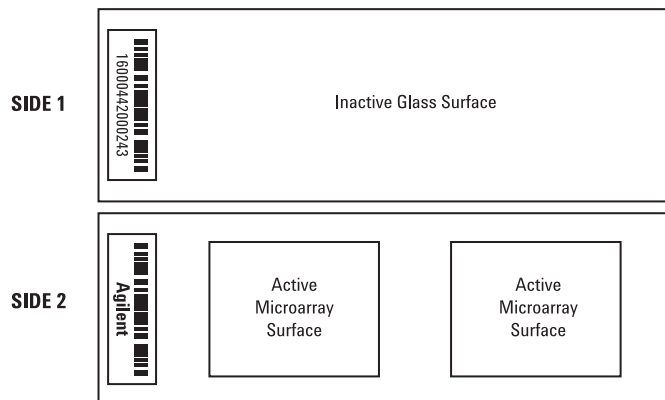
Objektna stekla Agilent imajo dve črtni kodi, po eno na vsaki strani stekla. Glejte [Slika 42](#). Stran z aktivno mikromrežo objektnega stekla postavite tako, da bo obrnjena proti pokrovu držala objektnega stekla.



**POZOR**

Nepravilno vstavljeno objektno steklo lahko poškoduje optični bralnik SureScan Dx.

**Double-barcoded slide example**



**Slika 42** Usmeritev objektnega stekla

### 3. korak Naložite držala objektnega stekla v kaseto

- 1 V oknu programa za nadzor optičnega branja kliknite **Open Door** (Odpri vrata), da odprete vrata optičnega bralnika.



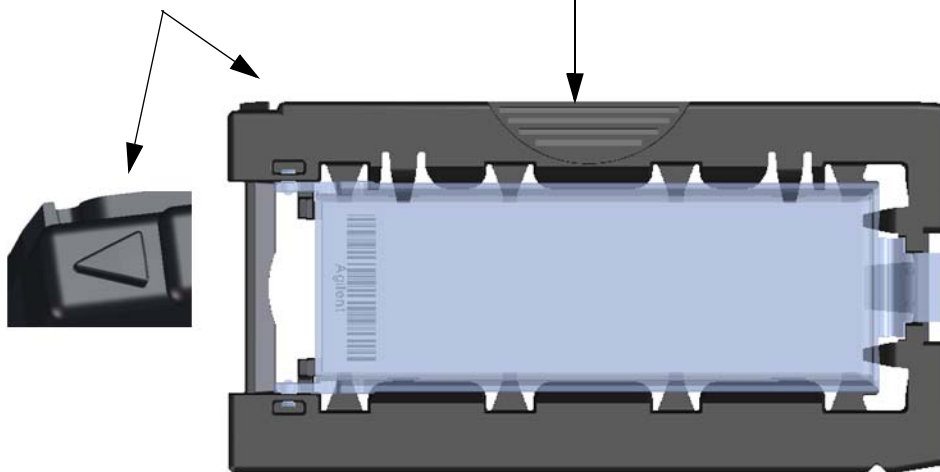
#### POZOR

Pravilen način odpiranja vrat optičnega bralnika je odpiranje z gumbom Open Door (Odpri vrata) v programu za nadzor optičnega branja. Vrat ne poskušajte odpirati ročno.

- 2 Primite za oprimek in dvignite držalo objektnega stekla. Če držalo objektnega stekla držite pravilno, puščica na vrhu držala objektnega stekla kaže v levo. Glejte [Slika 43](#).

Puščica pomaga določiti  
usmeritev optičnega bralnika

Oprimek



**Slika 43** Držalo za objektna stekla pomaga pri pravilnem vstavljanju objektnih stekel

Vstavite držalo objektnih stekel v katero koli prosto režo. Številke rež so jasno označene na kaseti objektnih stekel. Držala objektnih stekel v kaseto ne vstavljajte s silo; vstavitvev je enostavna, če je držalo pravilno poravnano tako, da je oprimek na vrhu, puščica pa kaže levo.



**Slika 44** Vstavljanje držala objektnih stekel v kaseto

- 3 Prepričajte se, da je držalo objektnih stekel nameščeno na dnu reže kasete.  
Številka reže za naloženo objektno steklo utripa modro.
- 4 Ponovite koraka 2 in 3, dokler niso v kaseto vstavljena vsa držala objektnih stekel.



**POZOR**

Nepravilna postavitev držala objektnih stekel v kaseto lahko resno poškoduje optični bralnik SureScan Dx Microarray.

- 5 V programu za nadzor optičnega branja kliknite **Close Door** (Zapri vrata).

Pri objektnih steklih, ki nimajo pripisanega protokola optičnega branja, polje za protokol optičnega branja ostane prazno, stanje reže pa ostane »Present« (Prisotno). Dodelite protokol optičnega branja, kot je opisano v »4. korak Nastavite ali spremenite nastavitve protokola optičnega branja«.

*Trenutne nastavitve protokola optičnega branja so za vsako izbrano objektno steklo prikazane v desnem podoknu glavnega okna programske opreme za nadzor optičnega branja.*

<b>AgilentHD_GX_2Color</b>	2-barvne mikromreže Agilent HD za izražanje genov
<b>AgilentHD_GX_1Color</b>	1-barvne mikromreže Agilent HD za izražanje genov
<b>AgilentG3_GX_2Color</b>	2-barvne mikromreže Agilent G3 za izražanje genov
<b>AgilentG3_GX_1Color</b>	1-barvne mikromreže Agilent G3 za izražanje genov
<b>AgilentHD_CGH</b>	Mikromreže Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Mikromreže Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Mikromreže Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Mikromreže Agilent G3 miRNA

#### 4. korak Nastavite ali spremenite nastavitve protokola optičnega branja

Ob prvi nastavitvi optičnega branja objektnega stekla izberite protokol optičnega branja, ki ga želite uporabiti.

- Za vsako objektno steklo v tabeli rež kliknite protokol optičnega branja in izberite protokol, ki ga boste uporabili za optično branje objektnega stekla.

Agilent ponuja osem predhodno naloženih protokolov, ki jih lahko izberete in uporabite z mikromrežami Agilent velike gostote (HD) in mikromrežami Agilent G3.

#### 5. korak (poljubno) Spremenite izhodno mapo

Izhodno mapo, v katero program shrani slikovne datoteke, ki jih ustvari optični bralnik, lahko spremenite.

- Za vsako objektno steklo v tabeli rež kliknite izhodno mapo in se pomaknite do lokacije zelene mape.

Agilent priporoča, da izberete lokalno mapo na sekundarnem trdem disku.

#### 6. korak Dodajte objektna stekla v čakalno vrsto za optično branje

- 1 V glavnem oknu nadzora optičnega branja kliknite **All to Queue** (Vsi v čakalno vrsto), da v čakalno vrsto dodate vsa objektna stekla v tabeli rež s stanjem »Ready for queue« (Pripravljen na čakalno vrsto).

Odpre se pogovorno okno za potrditev. Kliknite **Yes** (Da), da dodate objektna stekla v čakalno vrsto.

ALI

V tabeli rež v nadzoru optičnega branja kliknite celico **State** (Stanje) za prvo objektno steklo, ki ga želite optično prebrati, in kliknite **Add to Queue** (Dodaj v čakalno vrsto).

- 2 Za vsako dodatno objektno steklo, ki ga želite optično prebrati:
  - Kliknite celico **State** (Stanje) in izberite **Add to queue first** (Dodaj na začetek čakalne vrste), da dodate objektno steklo na začetek čakalne vrste za optično branje.

ALI

- Kliknite celico **State** (Stanje) in izberite **Add to queue last** (Dodaj na konec čakalne vrste), da dodate objektno steklo na konec čakalne vrste za optično branje.

Če morate iz čakalne vrste odstraniti vsa objektna stekla, v glavnem oknu nadzora optičnega branja kliknite **Empty Queue** (Izprazni čakalno vrsto).

## 7. korak Optično preberite objektna stekla

- 1 V glavnem oknu nadzora optičnega branja po potrebi kliknite **Close Door** (Zapri vrata).

Počakajte, da se vrata zaprejo in omogoči gumb **Start Scan** (Začni optično branje).
- 2 V glavnem oknu nadzora optičnega branja kliknite **Start Scan** (Začni optično branje), da začnete optično prebirati objektna stekla, dodana v čakalno vrsto.

## 8. korak Odstranite objektna stekla

- 1 V glavnem oknu nadzora optičnega branja kliknite **Open Door** (Odpri vrata), da odprete vrata optičnega bralnika.
- 2 Odprite vrata optičnega bralnika in odstranite držala objektnih stekel iz kasete.
- 3 Odstranite objektna stekla iz držal na naslednji način:
  - a Primate objektno steklo ob straneh tako, da je logotip Agilent obrnjen navzgor.
  - b Del prozornega plastičnega pokrova z jezičkom previdno potisnite in povlecite navzgor, da ga odprete.
  - c Del objektnega stekla s črtno kodo potisnite navzgor izpod držala, in pazite, da na prostoru za vzorce ne pustite prstnih odtisov.
  - d Primate objektno steklo ob straneh in ga odstranite iz držala.

## Instrucciones básicas para el uso

### Símbolos de seguridad en el escáner



#### Símbolo PELIGRO DE PUNTO DE COMPRESIÓN

Este símbolo se coloca sobre el área del producto donde hay riesgo de que las manos o los dedos queden atrapados. Mantenga las manos alejadas de los componentes móviles en esta área.

### Instrucciones de seguridad

El escáner SureScan Dx está diseñado para un uso seguro y sencillo. Asegúrese de entender y respetar todas las advertencias y precauciones antes de utilizar el escáner SureScan Dx.



#### ADVERTENCIA

No intente reparar ni acceder a los componentes internos del escáner SureScan Dx. Se expone a alto voltaje y a una radiación peligrosa del láser. La extracción de la cubierta principal anula la garantía.



#### ADVERTENCIA

Conecte el escáner SureScan Dx a una toma de alimentación con toma de tierra. La toma de tierra de protección es esencial por razones de seguridad.



#### PRECAUCIÓN

Para disminuir las vibraciones debido al rápido barrido de la excitación del láser por los microarrays, instale el escáner en un banco de laboratorio o una mesa resistente. No instale el escáner cerca de otro equipo de laboratorio que pueda causar vibraciones.



#### PRECAUCIÓN

El escáner SureScan Dx es sensible a situaciones de humedad por condensación. Siga las precauciones que se indican en la documentación del producto. Consulte "[Condiciones de humedad](#)" en la página 289.



## Condiciones de humedad

El escáner SureScan Dx es sensible a situaciones de humedad por condensación. Antes de abrir la caja de embalaje, espere siempre 12 horas para su acondicionamiento térmico en las instalaciones.

Para garantizar un rendimiento óptimo del escáner SureScan Dx, utilice el escáner solo en el siguiente porcentaje de humedad.

Funcionamiento: de 15% a 85% de HR a 30 °C

## Instrucciones de utilización

### Paso 1. Encienda el escáner de microarrays SureScan Dx e inicie el programa Scan Control

- 1 Encienda el escáner SureScan Dx utilizando el interruptor de alimentación situado en la parte delantera del aparato.
- 2 Encienda la estación de trabajo del ordenador y espere que se inicie.
- 3 Haga doble clic en el icono **Agilent Microarray Scan Control** para abrir el programa Scan Control.



**Figura 36** Icono de Agilent Microarray Scan Control

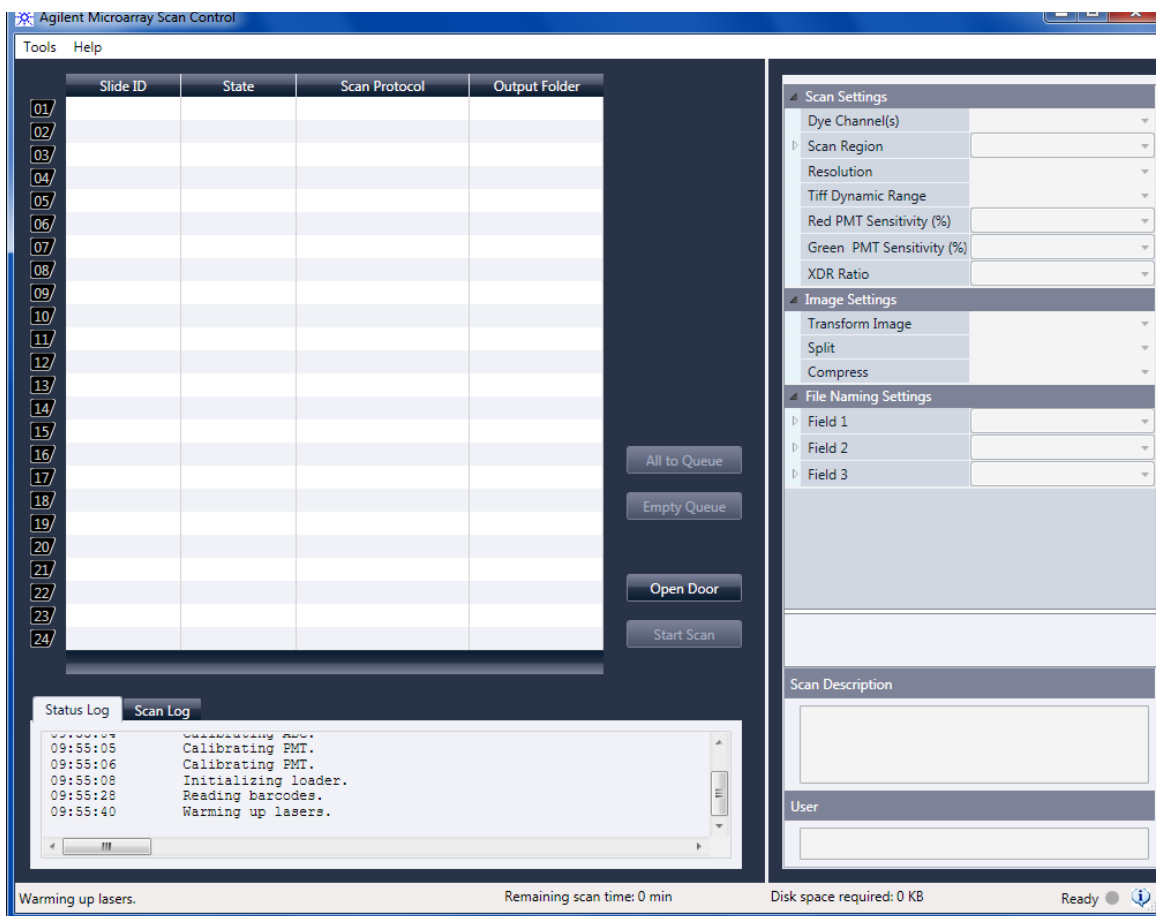
Cuando el programa se inicia, la ventana principal del programa Agilent Microarray Scan Control se abre y el escáner realiza la secuencia de inicialización. Una vez que finaliza la secuencia de inicialización, el botón Open Door se activa y es posible cargar las placas. Consulte [Figura 37](#) en la página 290.

### NOTA

Si el escáner tiene 24 placas cargadas cuando lo enciende, se producirá un error en la inicialización porque no puede realizar el ciclo de expulsión de placas.

## 7 Basic Instructions for Use

### Instrucciones de utilización



**Figura 37** Ventana del programa Agilent Microarray Scan Control: listo para agregar placas.

El estado del escáner se indica en la esquina inferior derecha de la ventana de Scan Control, en la barra de estado.

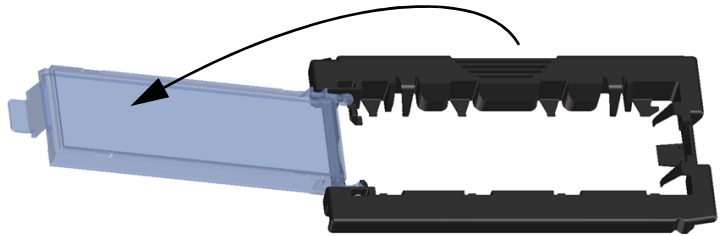
### Paso 2. Inserción de las placas en los portaplacas

*Las huellas de dedos pueden causar errores en la detección de la fluorescencia. Toque solo los bordes de la placa y utilice siempre guantes al manipularla.*

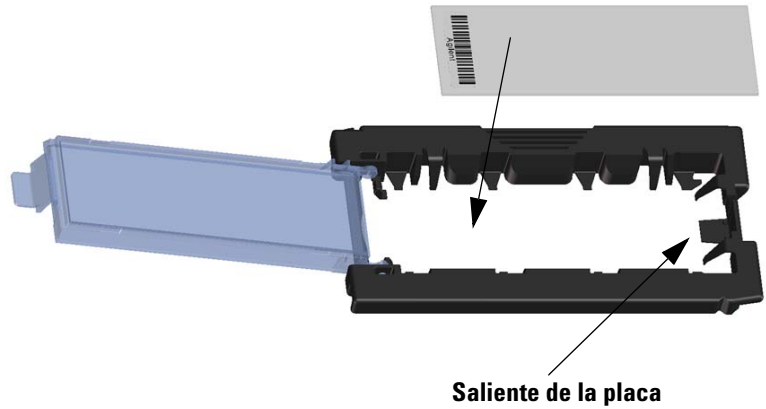
- 1 Antes de insertar la placa, coloque el portaplacas sobre una superficie plana, con la cubierta transparente hacia arriba y la lengüeta a la derecha. Esto permite garantizar que la placa

esté correctamente alineada al momento de insertarla en el portaplacas.

- 2 Empuje suavemente y tire del extremo de la lengüeta de la cubierta transparente de plástico para abrirlo.



**Figura 38** Abrir el portaplacas



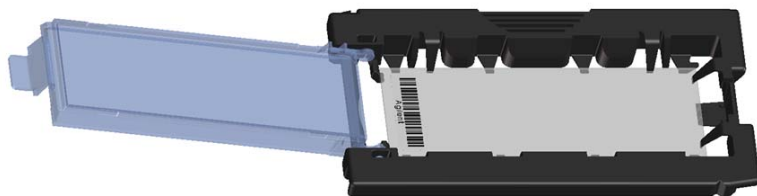
**Figura 39** Insertar la placa en el portaplacas

- 3 Inserte la placa en el portaplacas como se describe a continuación:
  - a Sostenga la placa por el extremo del código de barras.
  - b Asegúrese de que la superficie activa del microarray esté hacia arriba, hacia la cubierta de la placa y con el código de barra a la izquierda.
  - c Coloque con cuidado el extremo de la placa sin la etiqueta del código de barra sobre el saliente de la placa. Consulte [Figura 39](#).
  - d Baje suavemente la placa en el portaplacas. Consulte [Figura 40](#).
  - e Cierre la cubierta de plástico de la placa empujando el extremo de la lengüeta hasta escuchar un clic. Al hacer esto, la placa toma su posición dentro del portaplacas.
  - f Empuje suavemente y tire del extremo de la lengüeta de la cubierta transparente de plástico para abrirla nuevamente y verifique que la placa esté correctamente colocada.  
Una vez insertada, la placa queda en una posición horizontal y coincide con los puntos de alineación del portaplacas.
  - g Cierre la cubierta de plástico de la placa empujando el extremo de la lengüeta hasta escuchar un clic. Consulte [Figura 41](#).

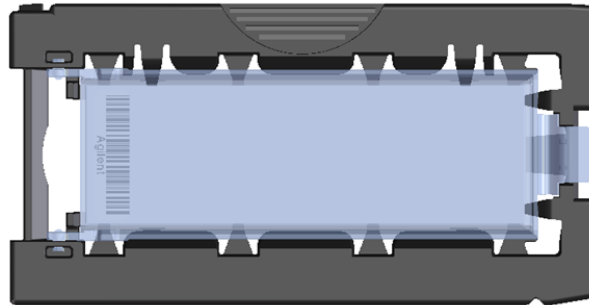


**PRECAUCIÓN**

Si la lengüeta de la cubierta de plástico de la placa está demasiado tensada, puede que no encaje en su sitio adecuadamente. Deshágase de los portaplacas que no hacen clic al cerrarlos.



**Figura 40** Placa insertada en portaplacas



**Figura 41** Portaplaclas: cerrado con placa

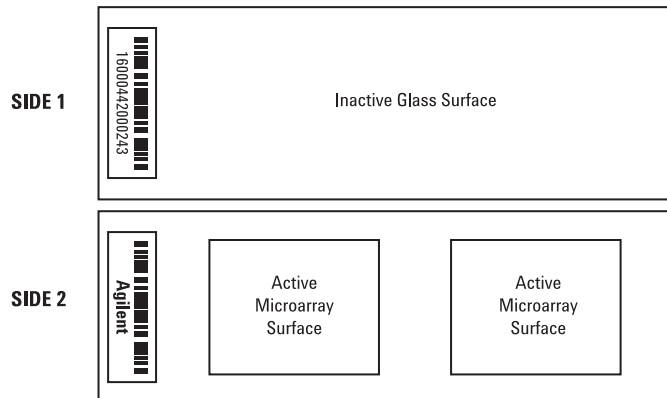
Las placas de Agilent tienen dos códigos de barras, una en cada lado del cristal. Consulte [Figura 42](#). Coloque el lado de la placa con el microarray activo mirando hacia la cubierta del portaplaclas.



**PRECAUCIÓN**

Una placa insertada incorrectamente puede dañar el escáner SureScan Dx.

**Double-barcoded slide example**



**Figura 42** Orientación de la placa

### Paso 3. Cargar los portaplasas en el cassette

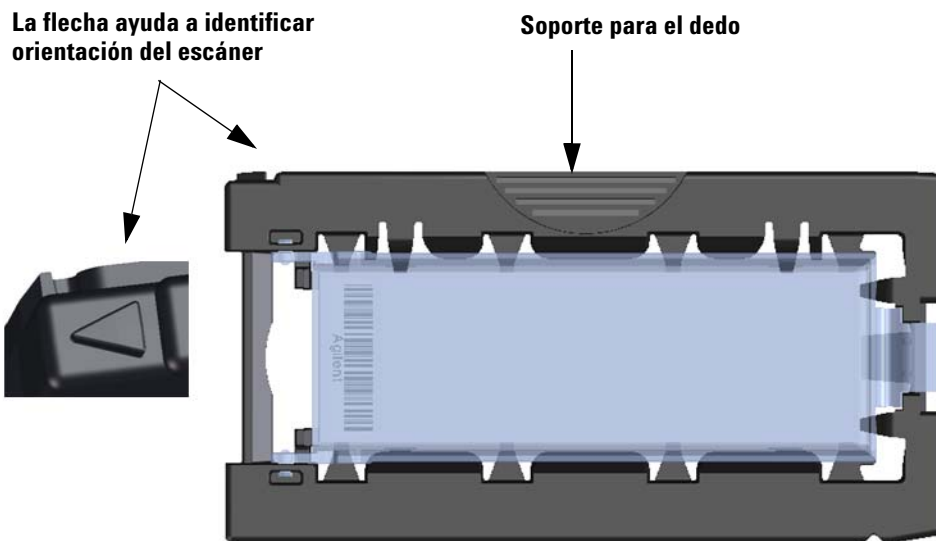
- 1 En la ventana del programa Scan Control, haga clic en **Open Door** para abrir la puerta del escáner.



#### PRECAUCIÓN

La forma correcta de abrir la puerta del escáner es mediante el botón Open Door en el programa Scan Control. No intente abrir la puerta manualmente.

- 2 Levante el portaplasas mediante el soporte para el dedo. La flecha ubicada en la parte superior del portaplasas apunta hacia la izquierda cuando levanta el portaplasas correctamente. Consulte [Figura 43](#).



**Figura 43** El portaplasas le permite insertar las placas correctamente

Inserte un portaplacas en cualquier ranura abierta. Los números de las ranuras están claramente etiquetados en el cassette de la placa. No fuerce el portaplacas en el cassette, ya que se inserta fácilmente si está correctamente alineado con el soporte para el dedo en la parte superior y la flecha hacia la izquierda.



**Figura 44** Insertar el portaplacas en el cassette

**3** Asegúrese de que el portaplacas esté colocado en la parte inferior de la ranura del cassette.

El número de la ranura para la placa cargada se indica en azul.

**4** Repita los pasos 2 a 3 hasta que todos los portaplacas estén cargados en el cassette.



**PRECAUCIÓN**

La colocación incorrecta del portaplacas en el cassette puede provocar serios daños en el escáner SureScan Dx.

**5** En el programa Scan Control, haga clic en **Close Door**.

Para las placas que no tienen asignado un protocolo de barrido a su diseño, el protocolo de barrido permanece vacío y el estado de la ranura permanece como "Present". Asigne un protocolo de barrido como se describe en "Paso 4. Establecimiento o cambio de los ajustes de barrido del protocolo".

*Los ajustes actuales del protocolo de barrido se muestran para cada placa seleccionada en el panel derecho de la ventana principal del programa Scan Control.*

<b>AgilentHD_GX_2Color</b>	Microarrays de expresión génica Agilent HD 2-color
<b>AgilentHD_GX_1Color</b>	Microarrays de expresión génica Agilent HD 1-color
<b>AgilentG3_GX_2Color</b>	Microarrays de expresión génica Agilent G3 2-color
<b>AgilentG3_GX_1Color</b>	Microarrays de expresión génica Agilent G3 1-color
<b>AgilentHD_CGH</b>	Microarrays Agilent HD CGH/CGH+SNP/CNV/ChIP
<b>AgilentG3_CGH</b>	Microarrays Agilent G3 CGH/CGH+SNP/CNV/ChIP
<b>AgilentHD_miRNA</b>	Microarrays Agilent HD miRNA
<b>AgilentG3_miRNA</b>	Microarrays Agilent G3 miRNA

#### **Paso 4. Establecimiento o cambio de los ajustes de barrido del protocolo**

Cuando configure el barrido para una placa por primera vez, seleccione el protocolo de barrido que desea utilizar.

- Para cada placa de la tabla de ranuras, haga clic en el Scan Protocol y seleccione el protocolo de barrido que desea utilizar para escanear la placa.

Agilent facilita ocho protocolos precargados para su selección y uso con microarrays de alta densidad (HD) de Agilent y microarrays Agilent G3.

#### **Paso 5. (Opcional) Cambiar la carpeta de salida**

Puede cambiar la carpeta de salida especificada donde el programa guarda los archivos de imagen creados por el escáner.

- Para cada placa de la tabla de ranuras, haga clic en Output Folder y busque la ubicación de la carpeta deseada.

Agilent recomienda seleccionar una carpeta local en una unidad de disco duro secundaria.

#### **Paso 6. Incorporación de las placas a la cola del escaneo**

- 1 En la ventana principal de Scan Control, haga clic en **All to Queue** para agregar a la cola de escaneo todas las placas de la tabla de ranuras que muestren el estado "Ready for queue".

Aparecerá un cuadro de diálogo de confirmación. Haga clic en **Yes** para agregar las placas a la cola.

O BIEN



En la tabla de ranuras de Scan Control, haga clic en la celda **State** para la primera placa que desea escanear y haga clic en **Add to Queue**.

2 Para cada placa adicional que desea escanear:

- Haga clic en la celda **State** y seleccione **Add to queue first** para agregar la placa al principio de la cola de escaneo.

O BIEN

- Haga clic en la celda **State** y seleccione **Add to queue last** para agregar la placa al final de la cola de barrido.

Si tiene que extraer todas las placas de la cola, haga clic en **Empty Queue** en la ventana principal de Scan Control.

### Paso 7. Barrido de las placas

1 En caso de ser necesario, en la ventana principal de Scan Control, haga clic en **Close Door**.

Espere hasta que se cierre la puerta y se active el botón **Start Scan**.

2 En la ventana principal de Scan Control, haga clic en **Start Scan** para iniciar el escaneado de las placas que se agregaron a la cola.

### Paso 8. Extracción de las placas

1 En la ventana principal de Scan Control, haga clic en **Open Door** para abrir la puerta del escáner.

2 Abra la puerta del escáner y retire los portaplacas del cassette.

3 Retire las placas de los portaplacas del siguiente modo:

- a Sostenga el portaplacas por los laterales con el logotipo de Agilent hacia arriba.
- b Empuje suavemente y tire del extremo de la lengüeta de la cubierta transparente de plástico para abrirlo.
- c Empuje sobre el extremo del código de barras de la placa por debajo del portaplacas para no dejar huellas en el área de la muestra.
- d Sujete la placa por los laterales y retírela del portaplacas.

## Grundläggande instruktioner för användning

### Säkerhetssymboler på skanner



#### Symbolen FÖRSIKTIGHET! KLÄMRISK

Den här symbolen är placerad på produkten där det finns risk för att klämma händerna eller fingrarna. Håll händerna borta från rörliga delar i detta område.

### Säkerhetsriktlinjer

SureScan Dx-skannern är utformad för säkerhet och enkel användning. Innan du använder SureScan Dx-skannern ska du se till att du förstår och iakttar alla varningar och försiktighetsåtgärder.



#### VARNING

**Försök inte att reparera eller komma åt de inre komponenterna i SureScan Dx-skannern. Du riskerar exponering för hög spänning och skadlig laserstrålning. Om du tar bort huvudkåpan ogiltigförklarar detta garantin.**



#### VARNING

**Anslut SureScan Dx-skannern till ett jordat eluttag. Det krävs skyddsjordning för säkerhet.**



#### FÖRSIKTIGHET

Ställ skannern på ett stabilt laboriebord för att minimera vibration på grund av snabbskanning från laserexcitation över mikromatrisen. Installera inte skannern i närheten av annan laborieutrustning som kan orsaka vibrationer.



#### FÖRSIKTIGHET

SureScan Dx-skannern är känslig för kondenserande fuktighet. Följ de försiktighetsåtgärder som uppges i produktdokumentationen. Se ["Fuktighetsförhållanden"](#) på sidan 299.

## Fuktighetsförhållanden

SureScan Dx-skannern är känslig för kondenserande fuktighet. Det krävs 12 timmars temperaturanpassning innan förpackningen öppnas.

För optimal prestanda skall SureScan Dx-skannern endast användas i följande fuktighetsintervall:

Drift: 15 % till 85 % relativ fuktighet vid 30 °C

## Driftnvisningar

### Steg 1. Slå på strömmen till mikromatrissskannern SureScan Dx och starta programmet Scan Control

- 1 Slå på strömmen till SureScan Dx-skannern genom att använda strömbrytaren på framsidan av instrumentet.
- 2 Slå på strömmen till datorn och vänta tills den är igång.
- 3 Dubbelklicka på ikonen **Agilent Microarray Scan Control** för att starta programmet Scan Control.



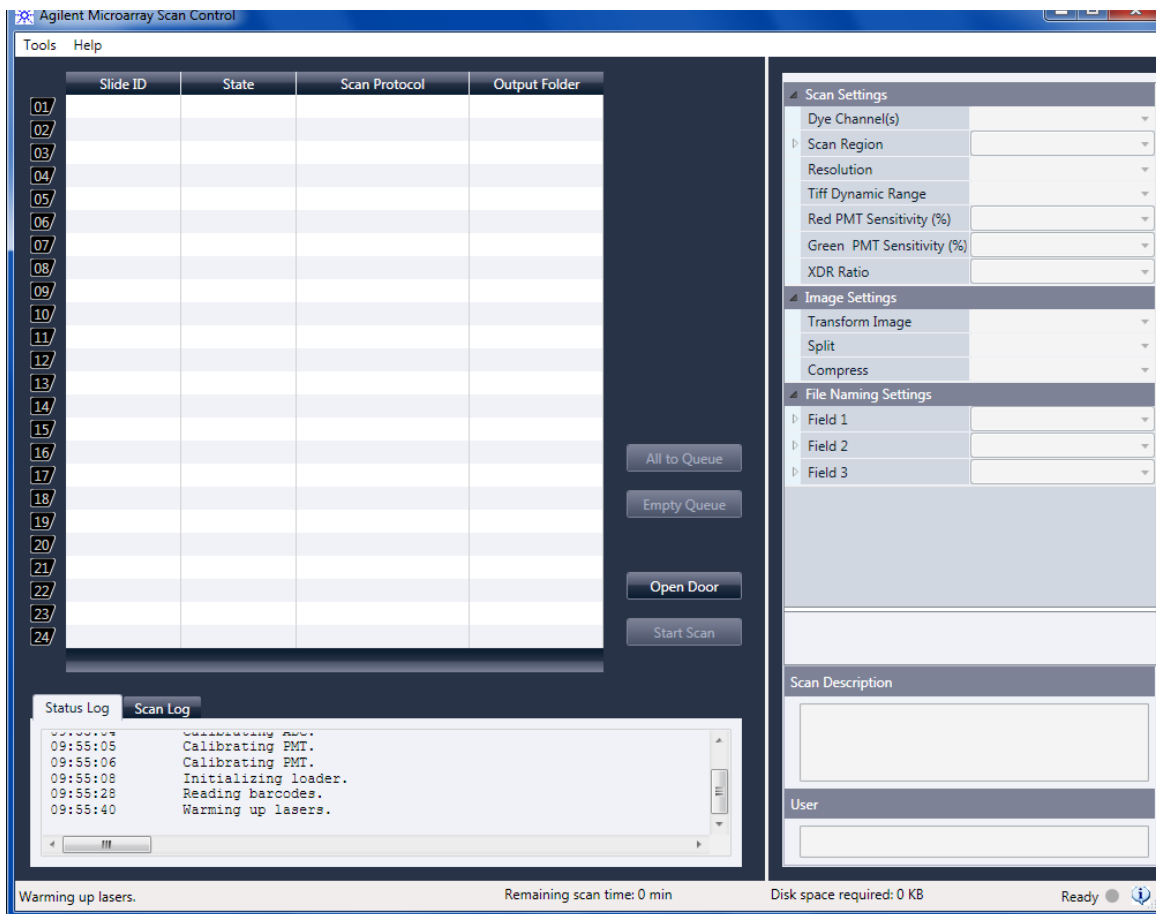
**Figur 36** Ikonen Agilent Microarray Scan Control

När programmet startats, öppnas huvudfönstret Agilent Microarray Scan Control och skannern utför sin initialiseringssekvens. När initialiseringssekvensen har slutförts, aktiveras knappen "Open Door" (Öppna lucka) och objektglaset kan laddas. Se [Figur 37](#) på sidan 300.

### ANM

Om skannern har 24 objektglas laddade när strömmen slås på, kommer initialiseringen att misslyckas eftersom cykeln för utmatning av objektglas inte kan utföras.

## 7 Basic Instructions for Use Driftnvisningar



**Figur 37** Agilent Microarray Scan Control fönster – redo att lägga till objektglas.

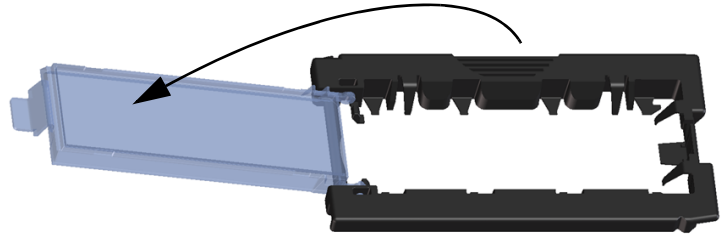
Status för skannern indikeras i det nedre högra hörnet i fönstret Scan Control, i statusfältet.

### Steg 2. Sätt i objektglaset i objektglashållarna

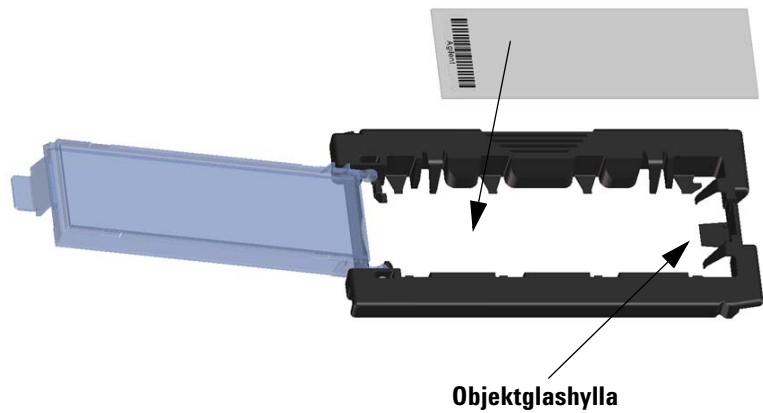
*Fingeravtryck orsakar fel vid fluorescensdetektion. Vidrör endast kanterna på objektglaset och använd alltid handskar vid hantering av objektglas.*

- 1 Innan du sätter i objektglaset, placera objektglashållaren på en plan yta, med det klara locket vänt uppåt, och med fliken till höger. Detta säkerställer att objektglaset är korrekt justerat när det sätts i objektglashållaren.

- 2 Tryck in och dra försiktigt upp den flikförsedda änden av det klara plasthöljet för att öppna hållaren



**Figur 38** Öppna objektglashållaren



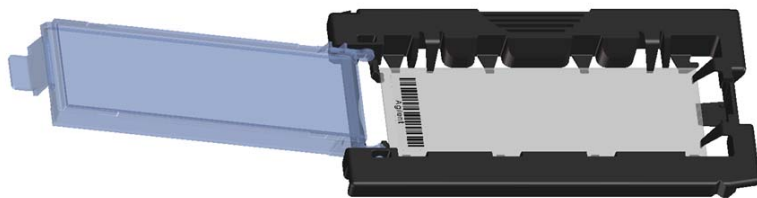
**Figur 39** Sätta objektglaset i objektglashållaren

- 3 Sätt objektglaset i hållaren enligt följande:
- a Håll objektglaset i den kortsida där streckkoden sitter.
  - b Se till att den aktiva mikromatrisytan är vänd uppåt, mot objektglashöljet, med streckkoden till vänster.
  - c Placera försiktigt objektglasets kortsida utan streckkod på objektglashyllan. Se [Figur 39](#).
  - d Sänk försiktigt ner objektglaset i objektglashållaren. Se [Figur 40](#).
  - e Stäng objektglashöljet av plast. Tryck på flikänden tills det "klickar". Detta flyttar in objektglaset i position i hållaren.
  - f Tryck försiktigt in och dra upp den flikförsedda änden av det klara plasthöljet för att öppna hållaren igen och kontrollera att objektglaset är korrekt placerat.  
När det väl har satts in ligger objektglaset plant och passar in med justeringspunkterna på objektglashållaren.
  - g Stäng objektglashöljet av plast. Tryck på flikänden tills det "klickar". Se [Figur 41](#).

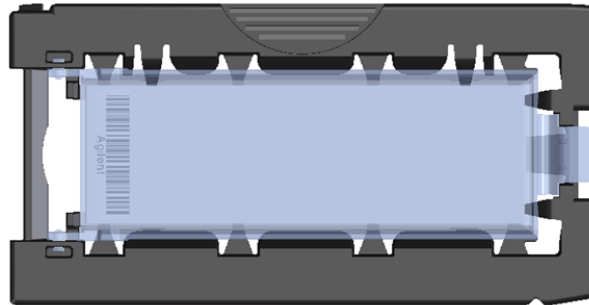


**FÖRSIKTIGHET**

Om fliken på objektglashöljet av plast har töjts ut för mycket, kan det förlora sin förmåga att "klicka" glaset i rätt position. Kassera objektglashållare som inte längre klickar när de stängs.



**Figur 40** Objektglas isatt i objektglashållare



**Figur 41** Objektglashållaren – stängd med objektglas

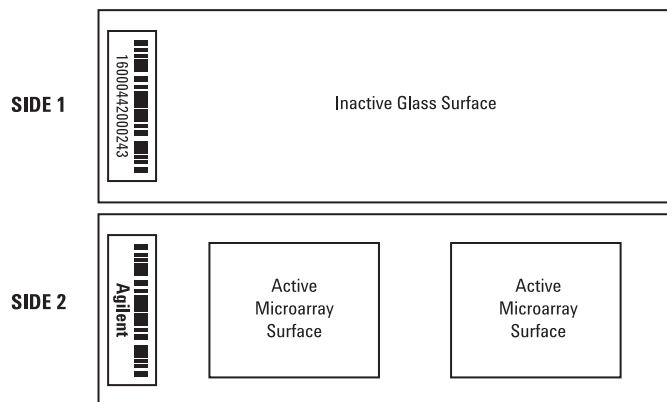
Agilent-objektglas har två streckkoder, en på vardera sida av glaset. Se [Figur 42](#). Placera den aktiva mikromatrisidan av objektglaset vänd mot objektglashållarens hölje.



**FÖRSIKTIGHET**

Ett felaktigt isatt objektglas kan skada SureScan Dx-skannern.

**Double-barcoded slide example**



**Figur 42** Objektglasorientering

### Steg 3. Ladda objektglashållarna i kassetten

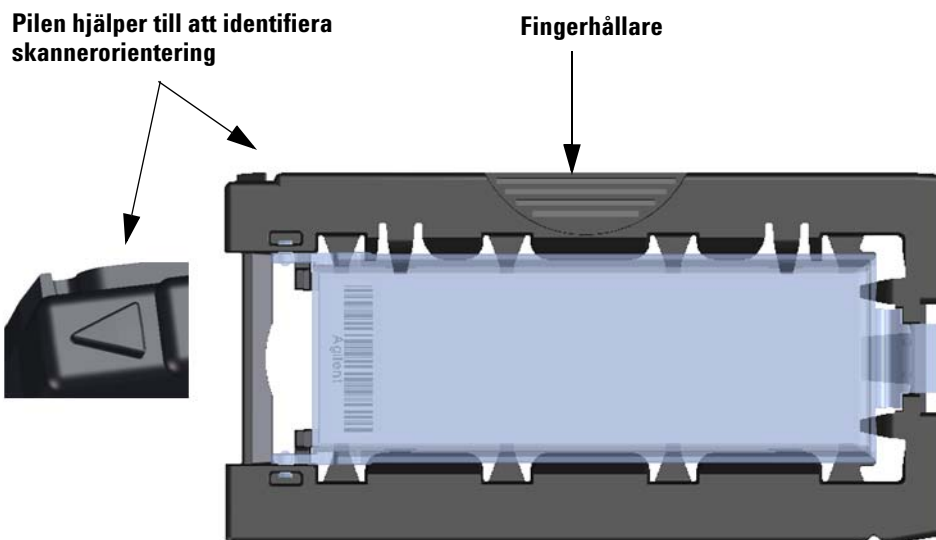
- 1 I programfönstret Scan Control, klicka på **Open Door** (Öppna lucka) för att öppna skannerluckan.



#### FÖRSIKTIGHET

Det korrekta sättet att öppna skannerluckan är att använda knappen Open Door (Öppna luckan) i programmet Scan Control. Försök inte öppna luckan manuellt.

- 2 Ta upp objektglashållaren genom att hålla på "fingerhållaren". Pilen på ovansidan av objektglashållaren pekar åt vänster när du tar upp objektglashållaren på rätt sätt. Se [Figur 43](#).



**Figur 43** Objektglashållaren hjälper dig att sätta i objektglasen på rätt sätt



Sätt i en objektglashållare i valfritt ledigt fack. Facknumren är tydligt märkta på objektglaskassetten. Tvinga inte in objektglashållaren i kassetten. Hållaren sätts enkelt i om den är korrekt justerad med fingerhållaren överst och pilen som pekar åt vänster.



**Figur 44** Sätta i objektglashållaren i kassetten

- 3 Se till att objektglashållaren kommer längst ner i kassettfacket.  
Facknumret för det laddade objektglaset blinkar blått.
- 4 Upprepa steg 2 t.o.m. 3 tills alla objektglashållare är laddade i kassetten.



**FÖRSIKTIGHET**

Felaktig placering av objektglashållaren i kassetten kan leda till allvarlig skada i SureScan Dx-mikromatrissskannern.

- 5 I programmet Scan Control, klicka på **Close Door** (Stäng lucka).

För objektglas som inte har ett skanningsprotokoll kopplat till sin design, förblir skanningsprotokollet tomt och fackets State (Läge) förblir "Present" (Närvarande). Ange ett skanningsprotokoll enligt beskrivningen i ["Steg 4. Ange eller ändra inställningar för skanningsprotokoll"](#).

*De nuvarande inställningarna för skanningsprotokollet visas för varje utvalt objektglas i den högra rutan i huvudfönstret för programvaran Scan Control.*

<b>AgilentHD_GX_2Color</b>	Agilent HD genexpression-genexpression-mikromatriser med 2 färger
<b>AgilentHD_GX_1Color</b>	Agilent HD genexpression-genexpression-mikromatriser med 1 färg
<b>AgilentG3_GX_2Color</b>	Agilent G3 genexpression-mikromatriser med 2 färger
<b>AgilentG3_GX_1Color</b>	Agilent G3 genexpression-mikromatriser med 1 färg
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP-mikromatriser
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP-mikromatriser
<b>AgilentHD_miRNA</b>	Agilent HD miRNA-mikromatriser
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA-mikromatriser

#### Steg 4. Ange eller ändra inställningar för skanningsprotokoll

Den första gången du konfigurerar för att skanna ett objektglas, välj ett skanningsprotokoll att använda.

- För varje objektglas i facktabellen, klicka på Scan Protocol (Skanningsprotokoll) och välj ett skanningsprotokoll att använda för skanning av objektglaset.

Agilent tillhandahåller åtta förladdade protokoll som du kan välja mellan och använda med Agilents HD-mikromatriser (High Density) och Agilent G3-mikromatriser.

#### Steg 5. (Valfritt) Ändra utmatningsmapp

Du kan ändra den angivna utmatningsmapp där programmet sparar bildfilerna som skapas av skannern.

- För varje objektglas i facktabellen, klicka på Output Folder (Utmatningsmapp) och bläddra till platsen för önskad mapp. Agilent rekommenderar att du väljer en lokal mapp på en sekundär hårddisk.

#### Steg 6. Lägg till objektglas i skanningskön

- 1 I huvudfönstret för Scan Control, klicka på **All to Queue** (Alla till kön) för att lägga till alla objektglas i facktabellen med ett State (Läge) som är "Ready for queue" (Redo för kö) i skanningskön.

En bekräftelseruta visas. Klicka på **Yes** (Ja) för att lägga till objektglasen i kön.

ELLER

I facktabellen i Scan Control, klicka på cellen **State** (Läge) för det första objektglaset som ska skannas och klicka på **Add to Queue** (Lägg till i kö).

- 2 För varje ytterligare objektglas som du vill skanna,
  - Klicka på cellen **State** (Läge) och välj **Add to queue first** (Lägg till i kön först) för att lägga till objektglaset längst upp i skanningskön.

ELLER

- Klicka på cellen **State** (Läge) och välj **Add to queue last** (Lägg till i kön sist) för att lägga till objektglaset längst ner i skanningskön.

Om du behöver ta bort alla objektglas från kön, klicka på **Empty Queue** (Töm kön) i huvudfönstret i Scan Control.

### Steg 7. Skanna objektglaset

- 1 Om det behövs klickar du på **Close Door** (Stäng lucka) i huvudfönstret Scan Control.  
Vänta tills luckan stängts och knappen **Start Scan** (Starta skanning) aktiverats.
- 2 I huvudfönstret Scan Control, klicka på **Start Scan** (Starta skanning) för att påbörja skanning av objektglas som lagts till i kön.

### Steg 8. Ta bort objektglaset

- 1 I huvudfönstret Scan Control, klicka på **Open Door** (Öppna lucka) för att öppna skannerluckan.
- 2 Öppna skannerluckan och ta bort objektglashållarna från kassetten.
- 3 Ta bort objektglaset från objektglashållarna, enligt följande:
  - a Håll objektglashållaren på sidorna med Agilent-logotypen uppåt.
  - b Tryck in och dra försiktigt upp den flikförsedda änden av det klara plasthöljet för att öppna hållaren.
  - c Tryck streckkodsändan av objektglaset uppåt genom att trycka underifrån för att undvika fingeravtryck på provområdet.
  - d Ta tag i objektglaset genom att hålla i kanterna och ta bort glaset från objektglashållaren

## Türk talimatlar

### Tarayıcı üzerindeki semboller



#### SIKIŞMA TEHLİKESİ sembolü

Bu sembol, ürün üzerinde el veya parmakların sıkışma olasılığı olan konumlara yerleştirilir. Bu alanda, ellerinizi hareketli parçalardan uzak tutun.

### Güvenlik kuralları

SureScan Dx tarayıcı güvenlik ve kullanım kolaylığı gözetilerek tasarlanmıştır. SureScan Dx tarayıcıyı çalıştırmadan önce tüm uyarıları ve ikazları anladığınızdan ve bunlara uyduğunuzdan emin olun.



#### UYARI

**SureScan Dx tarayıcının iç parçalarını tamir etmeye veya bu parçalara erişmeye kalkışmayın. Aksi takdirde, yüksek voltaja ve zararlı lazer radyasyonuna maruz kalma riskine girersiniz. Ana kapağın çıkarılması garantiyi geçersiz kılar.**



#### UYARI

**SureScan Dx tarayıcının fişini topraklı bir elektrik prizine takın. Güvenlik bakımından koruyucu topraklı priz gerektirir.**



#### DİKKAT

Mikrodizi boyunca lazer uyarımlarının hızlı taranmasından kaynaklanan titreşimi en aza indirmek için tarayıcıyı sağlam bir laboratuvar tezgahı veya masasının üzerine yerleştirin. Tarayıcıyı titreşime neden olabilecek diğer laboratuvar ekipmanlarının yakınına yerleştirmeyin.



#### DİKKAT

SureScan Dx tarayıcı yoğun nem koşullarına karşı hassastır. Ürün belgelerinde belirtilen önlemlere uyun. Bkz. sayfa 309'deki "[Nem koşulları](#)".

## Nem koşulları

SureScan Dx tarayıcı yoğunlaşmalı nem koşullarına karşı hassastır. Nakliye kutusunu açmadan önce, ısı dengesinin kurulması için tarayıcının 12 saat süreyle yerinde beklemesine izin verin.

En iyi performansı elde etmek için SureScan Dx tarayıcıyı yalnızca aşağıda belirtilen nem aralığında kullanın.

Çalışma: 30 °C'de %15 - %85 RH

## Çalıştırma talimatları

### 1. Adım. SureScan Dx Mikrodizi Tarayıcı'yı açın ve Scan Control (Tarama Denetimi) programını başlatın

- 1 Cihazın ön tarafındaki güç düğmesini kullanarak SureScan Dx tarayıcıyı açın.
- 2 İş istasyonunu bilgisayarı açın ve başlamasını bekleyin.
- 3 Scan Control (Tarama Denetimi) programını başlatmak için, **Agilent Microarray Scan Control** (Agilent Mikrodizi Tarama Denetimi) simgesine çift tıklayın.



**Şekil 36** Agilent Microarray Scan Control (Agilent Mikrodizi Tarama Denetimi) simgesi

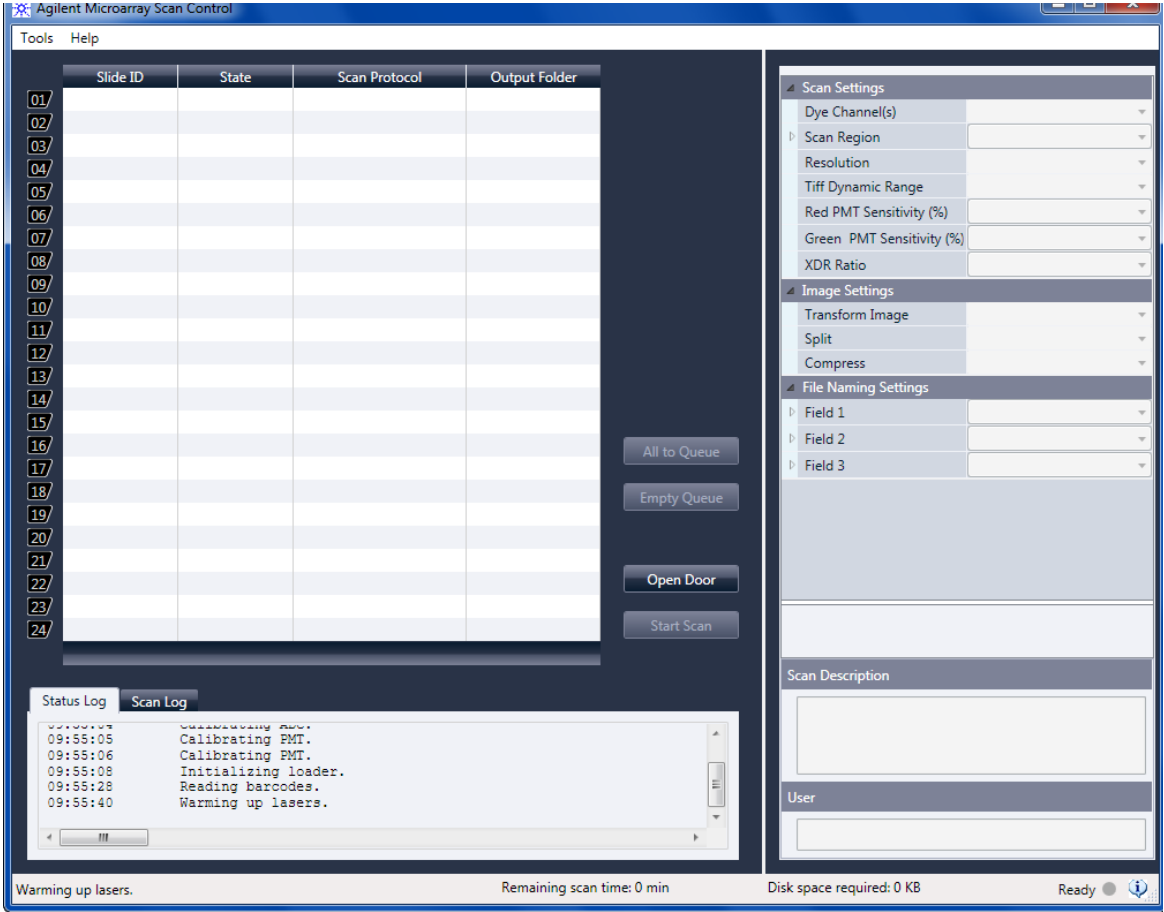
Program başladığında, Agilent Microarray Scan Control (Agilent Mikrodizi Tarama Denetimi) programının ana penceresi açılır ve tarayıcı başlatma işlemleri gerçekleştirir. Başlatma işlemleri tamamlandıktan sonra, Open Door (Kapağı Aç) düğmesi etkinleşir ve slaytları yükleyebilirsiniz. Bkz. sayfa 310'deki [Şekil 37](#).

**NOT**

Tarayıcıyı açtığınızda 24 slayt yüklüyse, tarayıcı slayt çıkarma döngüsünü gerçekleştiremeyeceğinden, başlatma işlemi başarısız olacaktır.

## 7 Basic Instructions for Use

### Çalıştırma talimatları



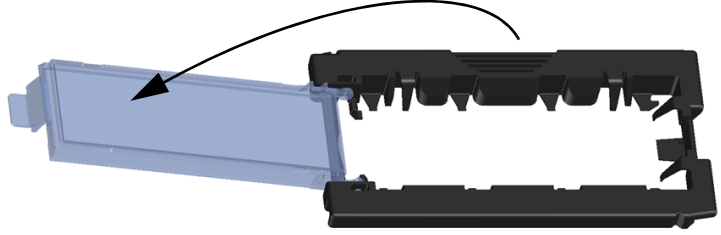
**Şekil 37** Agilent Microarray Scan Control (Agilent Mikrodizi Tarama Denetimi) programı penceresi – slayt yüklemeye hazır.

Tarayıcının durumu, Scan Control (Tarama Denetimi) penceresinin sağ alt köşesindeki durum çubuğunda gösterilir.

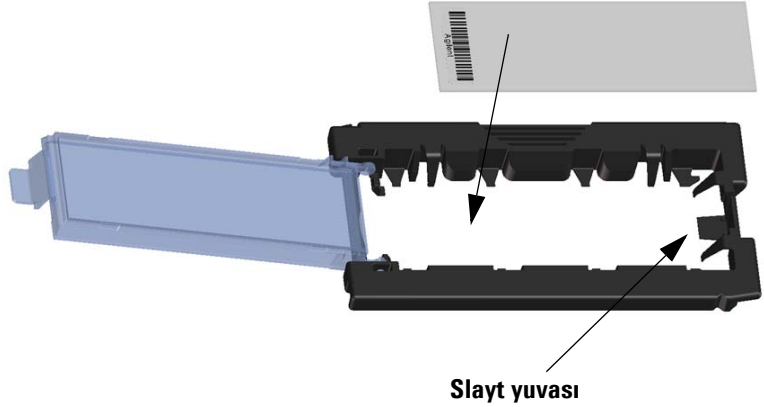
*Parmak izleri floresan algılamasında hatalara neden olur. Yalnızca slaydın kenarlarına dokunun ve slaytları ellerken her zaman eldiven kullanın.*

## 2. Adım. Slaytları slayt tutucuya yerleştirin

- 1 Slaydı yerleştirmeden önce, slayt tutucuyu şeffaf yüzü yukarı ve tırnaklı ucu sağa gelecek şekilde düz bir yüzeye koyun. Bunun yapmanız, slayt tutucuya yerleştirmeden önce slaydı düzgün hizaladığınızdan emin olmanızı sağlar.
- 2 Şeffaf plastik kapağı açmak için tırnaklı ucunu hafifçe itip yukarı çekin.



Şekil 38 Slayt tutucunun açılması



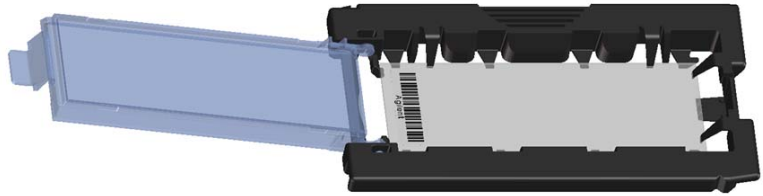
Şekil 39 Slaydın slayt tutucuya yerleştirilmesi

- 3 Slaydı tutucuya aşağıdaki şekilde yerleştirin:
- Slaydı barkodlu ucundan tutun.
  - Aktif mikrodizi yüzeyinin, barkod sola gelecek şekilde, slayt kapağına doğru yukarı baktığından emin olun.
  - Slaydın barkodsuz ucunu dikkatle slayt yuvasına yerleştirin. Bkz. [Şekil 39](#).
  - Slaydı yavaşça slayt tutucuya indirin. Bkz. [Şekil 40](#).
  - Tırnaklı ucu “tık” sesi duyana kadar iterek plastik slayt kapağını kapatın. Bu hareket slaydı tutucu içine yerleştirir.
  - Şeffaf plastik kapağı tekrar açmak için tırnaklı ucunu hafifçe itip yukarı çekin ve slaydın doğru yerleştirildiğini doğrulayın.  
Yerine yerleştirildikten sonra, slayt düz durmalı ve slayt tutucu üzerindeki hizalama noktalarıyla eşleşmelidir.
  - Tırnaklı ucu “tık” sesi duyana kadar iterek plastik slayt kapağını kapatın. Bkz. [Şekil 41](#).



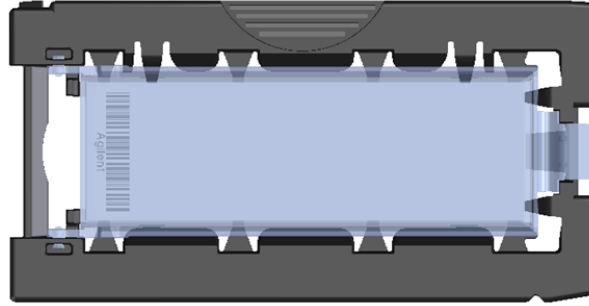
**DİKKAT**

Plastik slayt kapağındaki tırnak aşırı zorlanırsa, “tık” sesi çıkararak yerine düzgün oturmayabilir. Kapattığınızda tık sesi çıkarmamaya başlayan slayt tutucularını atın.



**Şekil 40** Slayt tutucuya yerleştirilmiş slayt





Şekil 41 Slayt tutucu– slayt içinde kapatılmış

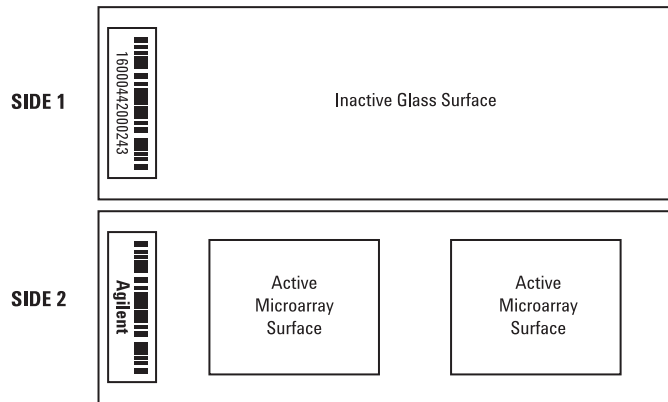
Agilent slaytlarında, camın her iki yüzünde olmak üzere iki barkod bulunur. Bkz. Şekil 42. Slaydı aktif mikrodizili yüzü slayt tutucunun kapağına doğru bakacak şekilde yerleştirin.



**DİKKAT**

Düzgün yerleştirilmeyen bir slayt SureScan Dx tarayıcıya hasar verebilir.

**Double-barcoded slide example**



Şekil 42 Slayt yönü

### 3. Adım. Slayt tutucuları kasete yükleyin

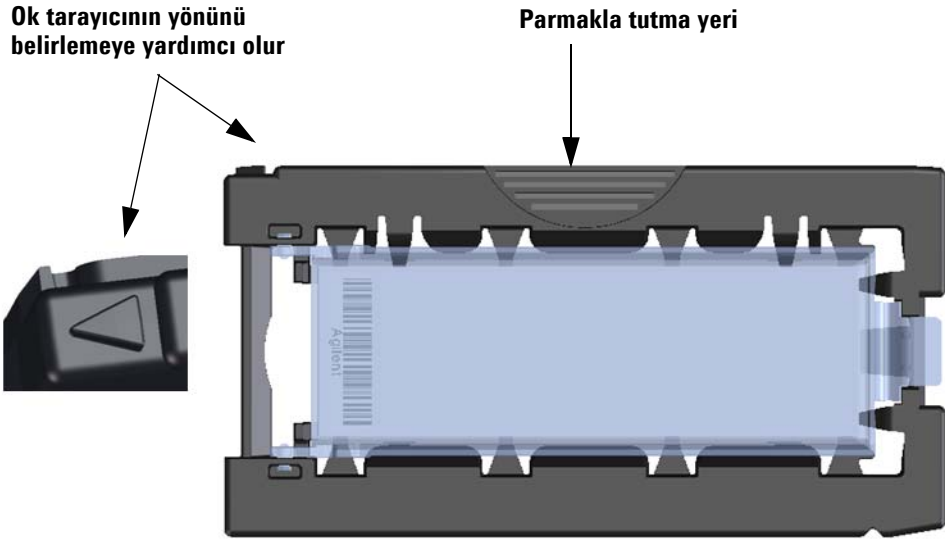
1 Scan Control (Tarama Denetimi) programı penceresinde **Open Door** (Kapağı Aç) düğmesine tıklayın.



#### DİKKAT

Tarayıcı penceresini doğru açma yöntemi, Scan Control (Tarama Denetimi) programında Open Door (Kapağı Aç) düğmesini kullanmaktır. Kapağı elle açmaya kalkışmayın.

2 Parmakla tutma yerini kullanarak slayt tutucuyu kaldırın. Slayt tutucuyu doğru kaldırdığınızda, slayt tutucunun üst tarafındaki ok sola bakar. Bkz. Şekil 43.



Şekil 43 Slayt tutucu, slaytları doğru yerleştirmenize yardımcı olur.

Boş yuvalardan herhangi birine bir slayt tutucu yerleştirin. Yuva numaraları slayt kasetinin üzerinde açıkça belirtilmiştir. Slayt tutucuyu kasetin üzerine zorla

yerleştirmeye çalışmayın; üst tarafındaki parmak tutma yeri doğru hizalanmış ve ok sola doğru bakıyorsa, kolayca yerine oturur.



**Şekil 44** Slayt tutucunun kasete yerleştirilmesi

- 3 Slayt tutucunun kaset yuvasının altına oturduğundan emin olun.  
Yüklenen slaydın yuva numarası mavi renkte yanıp söner.
- 4 Tüm slayt tutucuları kasete yüklenene kadar 2. ve 3. adımları tekrarlayın.



**DİKKAT**

Slayt tutucunun kasete düzgün yerleştirilmemesi, SureScan Dx Mikrodizi Tarayıcı'nın büyük hasar görmesine neden olabilir.

- 5 Scan Control (Tarama Denetimi) programında, **Close Door** (Kapağı Kapat) düğmesine tıklayın.

Tasarımlarıyla eşleştirilmiş tarama protokolü olmayan slaytlar için, tarama protokolü boş ve yuva Durumu "Present" ("Mevcut") olarak kalır. "4. Adım. Tarama protokolü ayarlarını yapın veya değiştirin" altında açıklandığı şekilde bir tarama protokolü atayın.

*Seçilen her bir slayt için geçerli tarama protokolü ayarları Scan Control (Tarama Denetimi) yazılımının ana penceresinin sağ bölümünde gösterilir.*

<b>AgilentHD_GX_2Color</b>	Agilent HD 2-renk geni ifadeli mikrodiziler
<b>AgilentHD_GX_1Color</b>	Agilent HD 1-renk geni ifadeli mikrodiziler
<b>AgilentG3_GX_2Color</b>	Agilent G3 2-renk geni ifadeli mikrodiziler
<b>AgilentG3_GX_1Color</b>	Agilent G3 1-renk geni ifadeli mikrodiziler
<b>AgilentHD_CGH</b>	Agilent HD CGH/CGH+SNP/CNV/ChIP mikrodiziler
<b>AgilentG3_CGH</b>	Agilent G3 CGH/CGH+SNP/CNV/ChIP mikrodiziler
<b>AgilentHD_miRNA</b>	Agilent HD miRNA mikrodiziler
<b>AgilentG3_miRNA</b>	Agilent G3 miRNA mikrodiziler

#### 4. Adım. Tarama protokolü ayarlarını yapın veya değiştirin

İlk kez slayt tararken, kullanmak için bir tarama protokolü seçin.

- Yuva tablosundaki her bir slayt için, Scan Protocol (Tarama Denetimi) öğesine tıklayın ve slaydı taramak için kullanmak üzere bir tarama protokolü seçin.

Agilent, seçmeniz ve Agilent yüksek tanımlı (HD) mikrodizileri ve Agilent G3 mikrodizileri ile kullanmanız için sekiz adet önyüklenmiş protokol sağlamaktadır.

#### 5. Adım. (İsteğe bağlı) Çıktı dosyasını değiştirin

Programın tarayıcının oluşturduğu resim dosyalarını kaydettiği çıktı dosyasını değiştirebilirsiniz.

- Her bir slayt yuvası tablosu için Output Folder (Çıktı Klasör) öğesine tıklayın ve istediğiniz klasör konumuna gidin.

Agilent, ikinci bir sabit sürücüde yerel bir klasör seçilmesini önerir.

#### 6. Adım. Slaytları tarama kuyruğuna ekleyin

1 Scan Control (Tarama Denetimi) ana penceresinde, yuva tablosunda “Ready for queue” (“Kuyruk için hazır”) durumundaki tüm slaytları tarama kuyruğuna eklemek için, **All to Queue** (Tümü Kuyruğa) öğesine tıklayın.

Bir onay iletişim kutusu belirir. Slaytları kuyruğa eklemek için, **Yes** (Evet) seçeneğine tıklayın.

VEYA

Scan Control (Tarama Denetimi) yuva tablosunda, taranacak ilk slayt için, **State** (Durum) hücreğine tıklayın ve **Add to Queue** (Kuyruğa Ekle) ögesine tıklayın.

- 2 Taramak istediğiniz her bir ek slayt için,
  - **State** (Durum) hücreğine tıklayın ve slaydı tarama kuyruğunun başına eklemek için, **Add to queue first** (Kuyruğa ilk ekle) ögesini seçin.

VEYA

- **State** (Durum) hücreğine tıklayın ve slaydı tarama kuyruğunun sonuna eklemek için, **Add to queue last** (Kuyruğa son ekle) ögesini seçin.

Tüm slaytları kuyruktan çıkarmanız gerekirse, Scan Control (Tarama Denetimi) ana penceresinde **Empty Queue** (Kuyruğu Boşalt) ögesine tıklayın.

## 7. Adım. Slaytlarınızı tarayın

- 1 Gerekirse, Scan Control (Tarama Denetimi) ana penceresinde **Close Door** (Kapağı Kapat) düğmesine tıklayın. Kapak kapanana ve **Start Scan** (Taramayı Başlat) düğmesi etkinleşene kadar bekleyin.
- 2 Kuyruğa eklenen slaytları taramaya başlamak için, Scan Control (Tarama Denetimi) ana penceresinde **Start Scan** (Taramayı Başlat) düğmesine tıklayın.

## 8. Adım. Slaytları çıkarın

- 1 Tarayıcı kapağını açmak için, Scan Control (Tarama Denetimi) programı penceresinde **Open Door** (Kapağı Aç) düğmesine tıklayın.
- 2 Tarayıcı kapağını açın ve slayt tutucularını kasetten çıkarın.
- 3 Slaytları slayt tutuculardan aşağıdaki şekilde çıkarın:
  - a Slayt tutucuyu Agilent logosu yukarı gelecek şekilde kenarlarından tutun.
  - b Şeffaf plastik kapağı açmak için tırnaklı ucunu hafifçe itip yukarı çekin.
  - c Numune alanında parmak izi bırakmaktan kaçınmak için, slaydın barkodlu ucunu slayt tutucunun altından yukarı itin.
  - d Slaydı iki kenarından tutup slayt tutucudan çıkarın.

**7 Basic Instructions for Use**  
Çalıştırma talimatları

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