3500/3500xL Genetic Analyzer

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This document includes checklists to help you prepare your 3500/3500xL Genetic Analyzer for use after an extended shut down.

The checklists vary, depending on whether the instrument was shut down using the long-term shutdown procedure or the short-term shutdown procedure. We encourage you to follow the checklist that applies to your situation, then retain the completed checklist with the instrument service records.

- **Restart the 3500/3500xL Genetic Analyzer after a long-term shutdown (Instrument Shutdown Wizard):** Use this checklist if you followed the procedure in the instrument guide (see page 4) to shut down the instrument for > 2 weeks, including removing the capillary array and unplugging the instrument.
- **Restart the 3500/3500xL Genetic Analyzer after an extended short-term shutdown:** Use this checklist if you followed the procedure in the instrument guide (see page 4) to shut down the instrument for 1 to 2 weeks or if you did not perform any shutdown procedure. That is, the capillary array and reagents were left on the instrument, with the system powered on.

Also, we recommend that you review the maintenance procedures in the instrument guide (see page 4), and ensure that you perform these tasks when and as instructed.

Resources

I need …	Resource
Step-by-step instructions for tasks in this checklist	See “Instrument user and maintenance guides” on page 4.
A list of instrument consumables and reagents	See “Catalog numbers” on page 4.
To access more 3500/3500xL Genetic Analyzer tools, documentation, or troubleshooting content	Visit the **Applied Biosystems™ 3500/3500xL Genetic Analyzers Support Center**.
General product support	Visit **thermofisher.com/support**.
To request technical support or a service call	Visit **thermofisher.com/contactus**.

Instrument serial number:

Instrument location:

Instrument owner:

Restart the 3500/3500xL Genetic Analyzer after a long-term shutdown (Instrument Shutdown Wizard)

✓	Task
Prepare to set up the instrument	
☐	Start the system: • Power on the computer, **but do not log into Windows™ operating system yet**. • When the Ctrl + Alt + Delete screen opens, power on the instrument and wait for the green light. • Log into the INSTR-ADMIN account on the instrument computer. • Wait for all 4 instrument services to start and for the green check mark to display in the bottom-right task bar. When you hover your mouse over the green check mark, the pop-up window should show 4 services with **Y** after them. • Start the data collection software.
☐	Perform instrument computer maintenance tasks: • Back up the data folder that contains the .ab1, .fsa, or .hid files to an external hard drive. After backing up, contents can be deleted to increase storage space on the data drive. • If Security, Auditing, and E-Signature is enabled, then archive and purge audit records. • Defragment the computer hard drive. **Note:** If GeneMapper™ Software is installed, do not defragment the drive on which it is installed. • Check computer disk space. • Archive and purge library objects.
☐	Remove the polymer from the refrigerator, loosen the cap, then leave at ambient temperature for 30 to 60 minutes.
☐	Remove a new conditioning pouch, cathode buffer container (CBC), and anode buffer container (ABC) from the refrigerator, then leave at room temperature.
☐	Add 3 mL distilled water to a 10 mL luer lock syringe, then flush the water pump trap.
☐	Clean all instrument surfaces, including the autosampler and drip tray.
☐	Carefully open the capillary array box and inspect the new array for damage (e.g. broken capillary). If damaged, contact Technical Support.
☐	Prepare the spectral calibration standards per the product inserts that are shipped with the standard. You can also download product inserts from the Applied Biosystems™ 3500/3500xL Genetic Analyzers Support Center.
Set up the instrument	
☐	Click **Maintenance ▸ Wizards ▸ Reactivate the Instrument**, then follow the prompts to install the conditioning pouch and capillary array.
☐	When prompted by the Wizard, install fresh, unexpired polymer.
☐	Install fresh, unexpired ABC and CBC with new septa, then click **Refresh** in the Dashboard to update the consumables status.
☐	Perform spatial calibration with fill. If the spatial calibration passes, then click **Accept**. If it does not pass, then see the instrument guide (see page 4) for help.
☐	Follow the instructions in the instrument guide (see page 4) to perform the spectral calibrations (required after installing the capillary array and to ensure instrument performance). After the run completes, check the data to ensure that all capillaries passed and that if borrowing occurred, it was from a neighboring capillary. Click **Accept** to keep the spectral information.
☐	Follow the instructions in the instrument guide (see page 4) to run a Sequencing and/or a Fragment/HID install check to verify that the instrument meets specifications.

Restart the 3500/3500xL Genetic Analyzer after an extended short-term shutdown

✓	Task
Prepare to set up the instrument	
☐	Inspect the instrument. Check for: • Polymer crystals in the pump, polymer tubing, interconnect tubing, pump and lower block channels. If crystals are present, contact Support. • Dried polymer on the capillary array tips. If present, replace the capillary array. • Buffer levels that are below the fill line.
☐	Shut down the instrument and computer for at least two minutes.
☐	Start the system: • Power on the computer, **but do not log into Windows™ operating system yet**. • When the Ctrl + Alt + Delete screen opens, power on the instrument and wait for the green light. • Log into the INSTR-ADMIN account on the instrument computer. • Wait for all 4 instrument services to start and for the green check mark to display in the bottom-right task bar. When you hover your mouse over the green check mark, the pop-up window should show 4 services with **Y** after them. • Start the data collection software.
☐	Perform instrument computer maintenance tasks: • Back up the data folder that contains the .ab1, .fsa, or .hid files to an external hard drive. After backing up, contents can be deleted to increase storage space on the data drive. • If Security, Auditing, and E-Signature is enabled, then archive and purge audit records. • Defragment the computer hard drive. **Note:** If GeneMapper™ Software is installed, do not defragment the drive on which it is installed. • Check computer disk space. • Archive and purge library objects.
☐	Remove the polymer from the refrigerator, loosen the cap, then leave at ambient temperature for 30 to 60 minutes.
☐	Remove a new conditioning pouch, cathode buffer container (CBC), and anode buffer container (ABC) from the refrigerator, then leave at room temperature.
☐	Clean all instrument surfaces, including the autosampler and drip tray.
☐	Add 3 mL distilled water to a 10 mL luer lock syringe, then flush the water trap.
☐	***If replacing the capillary array:*** Carefully open the capillary array box and inspect the new array for damage (e.g. broken capillary). If damaged, contact Technical Support.
☐	Prepare the spectral calibration standards per the product inserts that are shipped with the standard. You can also download product inserts from the Applied Biosystems™ 3500/3500xL Genetic Analyzers Support Center.
Set up the instrument	
☐	Click **Maintenance ▸ Wizards ▸ Wash Pump and Channels Wizard**, then follow the prompts to wash the pump and channels with an unexpired conditioning reagent pouch and to install fresh polymer.
☐	Install fresh, unexpired ABC and CBC with new septa, then click **Refresh** in the Dashboard to update the consumables status.
☐	Perform spatial calibration with fill. If the spatial calibration passes, then click **Accept**. If it does not pass, then see the instrument guide (see page 4) for help.
☐	Follow the instructions in the instrument guide (see page 4) to perform the spectral calibrations (required after installing the capillary array and to ensure instrument performance). After the run completes, check the data to ensure that all capillaries passed and that if borrowing occurred, it was from a neighboring capillary. Click **Accept** to keep the spectral information.
☐	Follow the instructions in the instrument guide (see page 4) to run a Sequencing and/or a Fragment/HID install check to verify that the instrument meets specifications.

Instrument user and maintenance guides

Document title (click title to open link to document)	Pub. No.
3500/3500xL Genetic Analyzer with 3500 Series Data Collection Software v3.3 User Guide	100079380
3500/3500xL Genetic Analyzer with 3500 Series Data Collection Software 3.1 User Guide	100031809
3500/3500xL Genetic Analyzer with 3500 Series Data Collection Software v2 User Guide	4476988
3500/3500xL Genetic Analyzer with 3500 Series Data Collection Software v1 User Guide	4401661

Catalog numbers

Note: Refer to your instrument guide (see page 4) for a complete list of sequencing and fragment analysis standards.

Part description	Cat. No.
Arrays	
Capillary array, 8-Capillary, 50 cm	4404685
Capillary array, 8-Capillary, 36 cm	4404683
Capillary array, 24-Capillary, 50 cm	4404689
Capillary array, 24-Capillary, 36 cm	4404687
Polymers	
POP-7™ Polymer (96-sample)	A26073
POP-7™ Polymer (384-sample)	4393708
POP-7™ Polymer (960-sample)	4393714
POP-6™ Polymer (96-sample)	A26071
POP-6™ Polymer (384-sample)	4393717
POP-6™ Polymer (960-sample)	4393712
POP-4™ Polymer (96-sample)	A26070
POP-4™ Polymer (384-sample)	4393715
POP-4™ Polymer (960-sample)	4393710
CBC, ABC, and conditioning reagents	
Cathode Buffer Container	4408256
Anode Buffer Container	4393927
Conditioning reagent	4393718
Bases, retainers, and septa	
96-well retainer and base	4410228
96-well retainer and base (Fast)	4409530
384-well retainer and base	4410235
8-tube retainer and base	4410231
8-tube retainer and base (Fast)	4410233
MicroAmp™ 96-Well Tray/Retainer Set	403081
96-well septa (20 pk)	4412614
384-well septa (20 pk)	4412520
8-strip septa (24 pk)	4410701

Part description	Cat. No.
Hi-Di™ Formamide	
Hi-Di™ Formamide (25 mL)	4311320
Hi-Di™ Formamide (4 x 5 mL)	4440753
Hi-Di™ Formamide (5 mL)	4401457

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For descriptions of symbols on product labels or product documents, go to **thermofisher.com/symbols-definition**.

The information in this guide is subject to change without notice.

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Revision	Date	Description
A.0	22 May 2020	New document.