

List of category 3000 messages - Stainer errors

The following table lists error messages related to the slide stainer modules.

Message code	Message	What to do
3000	{0} failed to prepare for handoff.	Contact Roche support.
3001	{0} failed to complete tray handoff.	Contact Roche support.
3002	The {0} stainer has failed to process a tray.	First, allow all other trays to finish processing. Second, choose the shutdown button to exit the application. Third, once complete, restart the application. Finally, choose the start button to initialize the instrument and report the error to your local support.
3003	{0} failed to Initialize.	Contact Roche support.
3004	{0} failed to stop processing.	Contact Roche support.
3007	{0} failed to abort process.	Contact Roche support.
3008	{0} failed to detect tray.	Contact Roche support.
3009	{0} Disable process failed.	Contact Roche support.
3010	{0} vacuum pressure is too low.	Restart the instrument or contact Roche support.
3011	{0} vacuum pressure is too high.	Restart the instrument or contact Roche support.
3012	No vacuum pressure is detected in the {0}.	Restart the instrument or contact Roche support.
3014	The following door failed to close: {0}.	Attempt to re-enable the stainer. If this does not work: First, choose the shutdown button to exit the application. Second, once complete, restart the application. Finally, choose the start button to initialize the instrument. If this error continues to appear, contact your local support for help.
3015	{0} door open failed.	Contact Roche support.
3016	{0} transport failed to go to home.	Contact Roche support.
3017	{0} airknife failed to go to home.	Contact Roche support.
3018	{0} door failed to go to home.	Contact Roche support.
3019	{0} temperature is too low (below threshold).	Contact Roche support.
3020	Temperature of the following component is too high (above threshold): {0}.	Make sure that all instrument ventilation is connected and within specifications. You may need to contact local facility support to make sure it is in the following specification: Venting specifications: 60–70 CFM; 1222–1426 ft/min. More information can be found in the User Guide. Contact your local support for help.

 Slide stainer module errors

Message code	Message	What to do
3021	{0} cannot start up with tray present.	Contact Roche support.
3022	{0} temperature is extremely high (above extreme threshold).	The system module {0} is disabled due to high temperatures and will not finish the tray until it cools down. Wait for the module to cool down, and then re-enable the module through the Instrument view, or contact Roche support.
3027	Fluid overflow detected in {0}.	First, choose the shut down button to exit the application. Second, shut down the PC. Finally, turn the instrument power switch to off. DO NOT RESTART THE INSTRUMENT! Contact your local support for help.

 Slide stainer module errors

List of category 4000 messages - Coverslipper errors

The following table lists error messages related to the coverslipper module.

Message code	Message	What to do
4000	Coverslipper failed to prepare for handoff. Contact your local support for help.	Contact Roche support.
4001	Coverslipper failed to complete handoff.	Contact Roche support.
4002	Coverslipper failed to process tray.	Contact Roche support.
4005	Coverslip Activator reservoir failed to fill.	Contact Roche support.
4006	Coverslip cassette failed to eject.	Restart the instrument or contact Roche support.
4007	Coverslipper abort process failed.	Contact Roche support.
4008	The coverslipper calibration values are not available.	Contact Roche support.
4009	Coverslipper disable process failed.	Restart the instrument or contact Roche support.
4010	Coverslipper start up failed.	Restart the instrument or contact Roche support.
4011	Coverslipper failed to detect tray.	If necessary, manually remove the tray from the Coverslipper. Attempt to process another tray in the Coverslipper. If this error continues to appear, contact your local support for help.
4012	The coverslipper pressure is above the operating limits.	Restart the instrument or contact Roche support.
4013	The coverslipper pressure is below the operating limits.	First, choose the shutdown button to exit the application. Second, once complete, restart the application. Finally, choose the start button to initialize the instrument and report the issue to local support.
4016	The coverslipper tray carrier is not in the correct position.	Restart the instrument or contact Roche support.

 Coverslipper errors

Message code	Message	What to do
4017	The coverslip cassette failed to reach the waste bin.	- Make sure the cassette is not stuck on the exit belt. - Check the coverslipper waste bin to ensure it is not full. - Check for broken coverslip debris on the exit track. - Re-enable the coverslipper module after removing any obstructions. If this error continues to appear, contact your local support for help.
4020	Coverslipper pressure sensor is generating invalid values.	Restart the instrument or contact Roche support.
4021	The coverslipper waste bin is full.	Remove empty cassettes from the waste bin.
4041	Coverslipper front head motor stalled after 10 attempts. Coverslipping has stopped.	Restart the instrument or contact Roche support.
4042	Front coverslip pickup failed after 3 attempts with 2 cassettes. Coverslipping has stopped.	Restart the instrument or contact Roche support.
4051	Coverslipper rear head motor stalled after 10 attempts. Coverslipping has stopped.	Restart the instrument or contact Roche support.
4052	Rear coverslip pickup failed after 3 attempts with 2 cassettes. Coverslipping has stopped.	Restart the instrument or contact Roche support.
4056	The coverslipper carriage did not return to home.	Restart the instrument or contact Roche support.
4057	The coverslipper carriage did not return to home during tray recovery.	Restart the instrument or contact Roche support.
4058	The coverslipper front vacuum head did not return to home.	Restart the instrument or contact Roche support.
4059	The coverslipper front vacuum head did not return to home during tray recovery.	Restart the instrument or contact Roche support.
4060	The coverslipper rear vacuum head did not return to home.	Disable and re-enable the Coverslipper. If this error continues to appear, disable the Coverslipper and coverslip the slides offline. Contact your local support for help.
4061	The coverslipper rear vacuum head did not return to home during tray recovery.	Restart the instrument or contact Roche support.
4111	The following Coverslipper motor failed: {0}. No further slides will be coverslipped until the problem is solved.	Let all trays finish processing in the current module. Contact your local support for more help.
4113	An unopened Coverslip Cassette is detected in the front position. Remove and then open the cassette before reinserting into the coverslipper.	Contact Roche support.
4114	An unopened Coverslip Cassette is detected in the rear position.	Remove and then open the cassette before reinserting into the coverslipper.
4115	Recovery from unopened coverslip cassette failed.	Restart the instrument or contact Roche support.
4116	Coverslipper failed to transition to stand by.	Restart the instrument or contact Roche support.
4117	Unable to eject cassette; waste bin full.	Remove empty cassettes from the waste bin.

Coverslipper errors

List of category 5000 messages - Slide dryer errors

The following table lists error messages related to the slide dryer.

Message code	Message	What to do
5000	Slide Dryer failed to prepare for handoff.	Contact Roche support.
5001	Slide Dryer failed to complete handoff.	Contact Roche support.
5002	Slide Dryer failed to process tray.	Contact Roche support.
5003	Slide Dryer initialization failed.	Contact Roche support.
5004	No tray is detected in Slide Dryer.	Contact Roche support.
5005	The slide dryer is operating below operating temperature.	Restart the instrument or contact Roche support.
5006	The slide dryer module temperature has exceeded the operating temperature threshold.	Allow all modules to complete processing. First, choose the shutdown button to exit the application. Second, once complete, restart the application. Finally, choose the start button to initialize the instrument. If this error continues to appear, contact your local support for help.
5008	Slide Dryer could not reach operating temperature.	Restart the instrument or contact Roche support.
5009	Slide Dryer heater is too hot (over temperature).	Restart the instrument or contact Roche support.
5010	Slide Dryer air temperature sensor failed.	Restart the instrument or contact Roche support.
5011	Slide Dryer heater temperature sensor failed.	Restart the instrument or contact Roche support.
5012	Slide Dryer could not reach the correct blower speed.	Contact Roche support.
5015	The slide dryer door failed to open.	Contact Roche support.
5017	The slide dryer door failed to close.	Contact Roche support.
5021	Slide Dryer failed to stop processing.	Contact Roche support.
5022	Slide Dryer is approaching over temperature.	Restart the instrument or contact Roche support.
5023	Slide Dryer is approaching under temperature.	Restart the instrument or contact Roche support.

 Slide dryer errors

List of category 6000 messages - Curing oven errors

The following table lists error messages related to the curing oven.

Message code	Message	What to do
6000	Curing Oven failed to prepare for handoff.	Contact Roche support.
6001	Curing Oven failed to complete handoff.	Contact Roche support.
6002	Curing Oven failed to process tray.	Contact Roche support.
6003	The curing oven's process could not start.	Contact Roche support.
6004	The Curing Oven's heater is operating below operating temperature.	Restart the instrument or contact Roche support.
6005	The Curing Oven is operating below operating temperature.	Restart the instrument or contact Roche support.
6006	The curing oven temperature has exceeded the operating temperature threshold.	First, allow all trays to complete processing. Second, choose the shutdown button to exit the application. Third, once complete, restart the application. Finally, choose the start button to initialize the instrument. If this error continues to appear, contact your local support for help.
6008	The curing oven's sensor is reporting a lower than normal temperature.	Restart the instrument or contact Roche support.
6009	The curing oven's sensor is reporting a temperature that is above normal.	Restart the instrument or contact Roche support.
6010	The curing oven's air sensor is reporting the incorrect temperature.	Restart the instrument or contact Roche support.
6011	The curing oven's heater sensor is reporting the incorrect temperature.	Restart the instrument or contact Roche support.
6012	The curing oven could not reach the correct blower speed.	Contact Roche support.
6015	The door to the curing oven would not open.	Restart the instrument or contact Roche support.
6017	Curing Oven door failed to close.	Warning, trays may be wet. First, allow the system to finish processing and recover all trays. First, choose the shutdown button to exit the application. Second, once complete, restart the application. Finally, choose the start button to initialize the instrument and report the error to your local support.
6018	The curing oven will not shut down.	Contact Roche support.

☐ Curing oven errors

List of category 7000 messages - Barcode reader errors

The following table lists error messages related to the barcode readers.

Message code	Message	What to do
7000	The slide ID process failed.	Contact Roche support.
7001	The barcode scanner failed.	Contact Roche support.
7002	The verification of the barcode scanner configuration failed.	Contact Roche support.
7003	The verification of the barcode scanner failed.	Contact Roche support.

 Barcode reader errors

List of category 8000 messages - Tray portal errors

The following table lists error messages related to the tray portals.

Message code	Message	What to do
8001	During recovery, the portal door closed.	Restart the instrument or contact Roche support.
8002	The portal door failed to open.	Attempt to manually open the portal door without using excessive force. If this error continues to appear, contact your local support for help.
8003	The portal door failed to close.	Attempt to manually close the portal door without using excessive force. If this error continues to appear, contact your local support for help.
8004	The tray is not properly loaded in portal bay {0}.	Refer to the User Guide section on Loading Trays Into Portal for more information. If this error continues to appear, try a different tray. If a different tray does not resolve the issue, contact local support for help.

 Tray portal errors

List of category 11000 messages - RFID errors

The following table lists error messages related to RFID readers.

Message code	Message	What to do
11000	There is an issue with the RFID: Unable to connect to reader on port {0:D}.	Contact Roche support.
11103	Unable to write to {0} tag. {0} is the name.	Contact Roche support.
11104	Unable to write to {0} tag.	Contact Roche support.

RFID errors

List of category 12000 messages - Scheduler errors

The following table lists error messages related to the scheduler.

Message code	Message	What to do
12008	Unable to abort schedule process, and it will continue.	Contact Roche support.

Scheduler errors

List of category 13000 messages - Database errors

The following table lists error messages related to the database.

Message code	Message	What to do
13002	Error occurred creating system backup. {0}	Contact Roche support.
13003	Attempted to execute backup/restore operation, while existing backup/restore operation in progress.	Contact Roche support.
13004	Error occurred restoring system from backup.	Contact Roche support.
13005	System backup completed.	Contact Roche support.
13006	System restore completed.	Contact Roche support.
13007	System backup completed. Backup was copied to fallback output location because copying to primary location failed: {0}	Contact Roche support.
13008	System backup completed. Old backup files could not be purged.	Contact Roche support.

Database errors

List of category 14000 messages - Communication errors

The following table lists error messages related to communication.

Message code	Message	What to do
14025	There is an issue with starting communications.	Contact Roche support.
14026	There is an issue connecting to the serial network provider.	Restart the instrument or contact Roche support.
14028	Failed to translate message {0} at {1} provider.	Contact Roche support.
14032	There is an incorrect firmware version. Contact your local support for help.	Contact Roche support.
14033	There is an incorrect FPGA version. Contact your local support for help.	Contact Roche support.
14034	An incorrect version of M-Code is being used.	Contact Roche support.
14035	An incorrect version of the transportation motor firmware is detected. Contact your local support for help.	Contact Roche support.
14036	There is an incorrect firmware version. Contact your local support for help.	Contact Roche support.
14037	There is an error with Ventana Connectivity communication settings.	Contact Roche support.
14038	Communication with the instrument has failed. Restart the instrument. If the problem persists, contact your local support for help.	Contact Roche support.

 Communication errors

List of category 20000 messages - Maintenance errors

The following table lists error messages related to maintenance.

Message code	Message	What to do
20014	The following door appears to be open: {0}.	Verify it is completely closed. First, choose the shutdown button to exit the application. Second, once complete, restart the application. Finally, choose the start button to initialize the instrument. If this error continues to appear, contact your local support for help.
20016	The daily cleaning cycle cannot start.	Make sure that a full bottle of {0} is loaded. If the loaded reagent bottle is full, remove the bottle, wait 10 seconds, and then reload the bottle.
20019	The instrument is currently in its daily cleaning cycle. The instrument will be available and the start button is enabled after the displayed soak time has elapsed.	Wait until cleaning cycle is finished before processing slides.
20021	Initialization failed.	Contact Roche support.
20022	A preventive maintenance task is pending.	Contact Roche support.

 Maintenance errors

Message code	Message	What to do
20023	A preventive maintenance task is overdue.	Contact Roche support.
20024	The maintenance record could not be created.	Contact Roche support.
20025	A preventive maintenance task was completed.	Contact Roche support.

Maintenance errors

List of category 22000 messages - Station errors

The following table lists error messages related to the station.

Message code	Message	What to do
22000	Unable to create station: {0}.	Restart the instrument or contact Roche support.
22001	There is an invalid station configuration.	Restart the instrument or contact Roche support.
22002	There is an invalid device configuration.	Restart the instrument or contact Roche support.
22003	Unable to find {0} in instrument.	Restart the instrument or contact Roche support.
22007	One or more critical modules has failed its firmware update. The instrument start-up action is disabled. Please contact local support.	Contact Roche support.
22008	One or more non-critical modules has failed its firmware update. Instrument functionality will be limited until the problem is corrected. Please contact local support.	Contact Roche support.

Station errors

List of category 23000 messages - Tray recovery

The following table lists error messages related to tray recovery.

Message code	Message	What to do
23000	A detected tray is no longer detected in {0}:	• Slide dryer: First, restart the application to activate tray recovery; the recovery icon is presented for the slide dryer. If the station is in an error state as denoted by the icon, wait at least 20 minutes for the tray to cool down. Second, shut down the instrument, then manually remove the tray, and finally contact local support for help. • Curing oven: Caution, the tray may be hot; wait at least 20 minutes to cool down. First, shut down the instrument, then manually remove the tray and contact local support for help. • Coverslipper: First, shut down the instrument, then manually remove the tray from the Coverslipper and contact local support. • Stainer: First, shut down the instrument, then manually remove the tray from the stainer and contact local support. • Transport: First, shut down the instrument, then manually recover the tray from the fork, and contact local support for help. • Portal or garage: Manually recover the tray from the portal or garage, and contact local support for help.

 Tray recovery

List of category 31000 messages - Module controller updates

The following table lists error messages related to module controller (firmware) updates.

Message code	Message	What to do
31000	Update file corrupt or not found for module controller update.	Contact Roche support.
31005	Unable to update FPGA at address {0}. 24 volt control circuit failure.	Contact Roche support.

 Module controller updates

Tray recovery troubleshooter

If the system has stopped and slide trays need to be recovered, investigate the following cause of error.

 Do not carry out this tray recovery procedure unless Roche Diagnostics has trained you to do so.

WARNING

Injury to operators and damage to the system

Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.

- ▶ Power off the computer and system prior to manually removing any trays.
- ▶ Wait at least 20 minutes after powering off the system to allow all trays in the slide dryer, stainers, and curing oven to cool before handling trays manually.
- ▶ Wait 20 minutes after powering off the system before touching any internal components of the system.

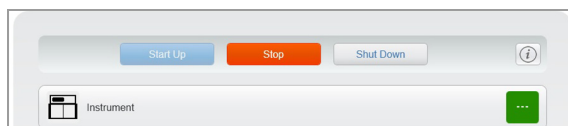
 About the staining system (55)

 About the transportation system (57)

▶ Turn off the system

Restarting the system usually recovers all trays and delivers them to the tray portals.

In an extreme situation, (for example, a fluid leak, fire, power outage, transport error, or computer issue) the system may not be able to restart. Determine if you can restart the system to proceed to recover trays.



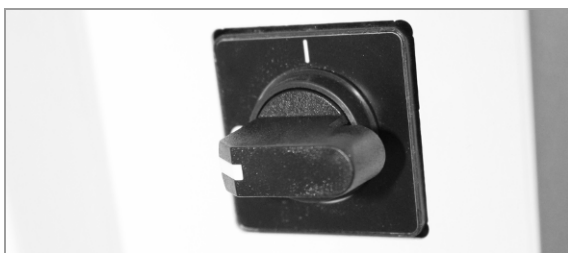
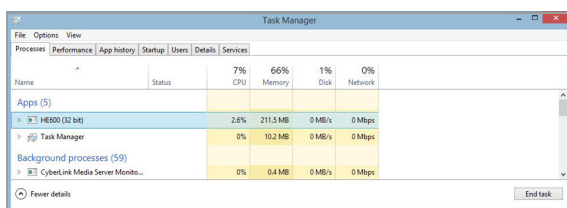
1 If the system is running, in the **Instrument view**, choose the **Stop** button.

→ If a prompt about initiating system maintenance displays, choose the **No** button.

2 To open **Task Manager**, press Ctrl+Alt+Delete on the keyboard, or press and hold the Windows taskbar at the bottom of the screen and choose **Task Manager**.

 Do not shut down the system by choosing the **Shut Down** button or the red **X** in the user interface. A full shut down initiates the 60 minute cleaning cycle and delays tray recovery.

→ Windows Task Manager displays.



Can the system be restarted?

- 3 Choose **HE600 (32bit)** and then choose the **End Task** button.
 - 4 Choose the Windows icon in the lower left corner of the screen.
 - 5 In the menu that displays in the lower left corner, choose  and choose then **Shut down**.
 - 6 On the left-hand side of the system, turn the power switch from I to O.
 - 7 Wait 20 minutes for the electricity to discharge and the trays and modules to cool.
 - 8 Call Roche support to let them know you experienced a critical system error.
- Yes. The computer can be accessed and the system can be restarted. ► Remove a tray from the transportation system (212)
 - or,
 - No. The computer cannot be accessed, or there is an environmental hazard. ► Contact Roche Service (223)

► Remove a tray from the transportation system

The following video demonstrates the process for removing a tray from the transportation system step-by-step. The blue door that you open to access the transportation system is called the elevator door. Continue reading the entire procedure for additional details.

CAUTION

Injury to operators and damage to the system

- Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.
- Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

Utility film

(.hwl): [ua_RemoveTrayTransSystem/UA_RemoveFromTransSystem.hwl](#)

Title: Removing a tray from the transportation system and restarting the system

You need a 4 mm hex key to complete this task.

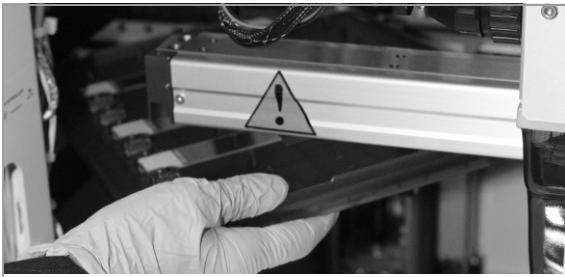


- 1 CAUTION!** Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the transportation system.

Place a 4mm hex key into the slot on the bottom right of the elevator door (the blue transportation system door).

- 2** Rotate the hex key to unlock the elevator door.

→ The elevator door is open.



- 3** Gently lift the slide tray from the transportation forks to bring the tray out of the system.

- 4** Close the elevator door.

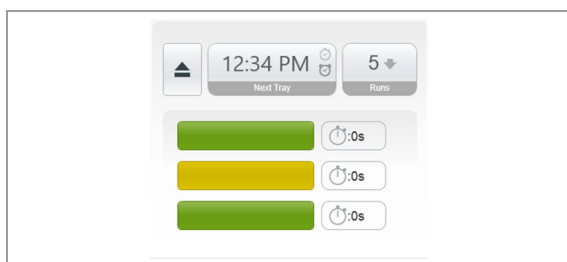


- 5** Restart the system by turning the power switch from O to I, and pressing the power button on the computer.

→ The auto-recovery feature automatically moves all remaining trays to the tray portals.



- 6** Remove all trays from the tray portals.



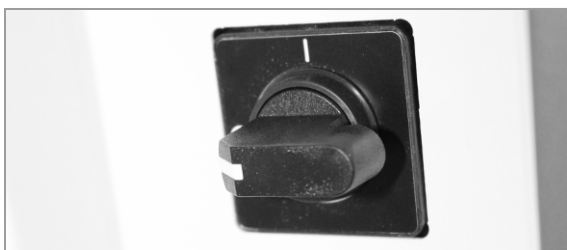
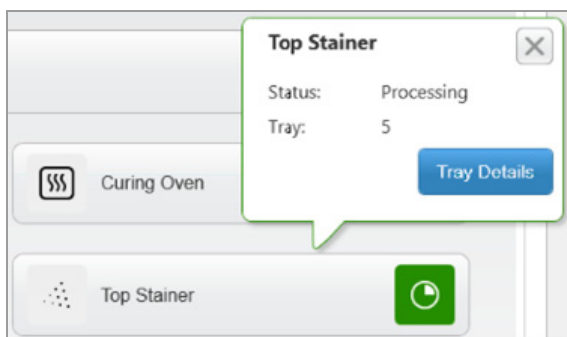
Are there trays remaining in the system?

- 7 In the **Operating** tab, determine number of trays in the system.

- No. In the **Operating** tab, the tray count is zero.
► Review troubleshooting (223)
or,
- Yes. In the **Operating** tab, the tray count is above zero.
► Prepare to remove the tray from other modules inside the system (214)

► Prepare to remove the tray from other modules inside the system

If the auto-recovery process has not moved all available trays to the tray portals, you must power down the system again to prepare to recover the trays from other parts of the system.



- 1 In the **Instrument** tab, choose each of the system modules to determine the location of the remaining trays.
 - ❶ If the number of trays shown in the **Operating** tab is higher than the total number of trays shown in each of the modules, the remaining trays are probably in the garage.
- 2 Make a note of the locations of the trays in the system.
- 3 Shut down the system using **Task Manager** and turning the power switch from I to O.
 - ❶ Do not use the **Shut Down** button to turn off the system.

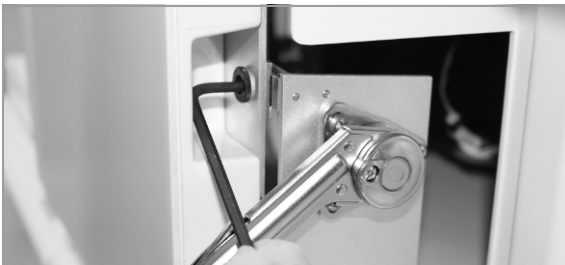
Where are the remaining trays in the system?

- ▶ Remaining tray is in the garage (215)
or,
- ▶ Remaining tray is in the slide dryer (216)
or,
- ▶ Remaining tray is in the slide stainer module (218)
or,
- ▶ Remaining tray is in the coverslipper (220)
or,
- ▶ Remaining tray is in the curing oven (222)

▶ Remaining tray is in the garage**⚠ CAUTION****Injury to operators and damage to the system**

- ▶ Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.
Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

You need a 4 mm hex key to complete this task.



- 1** CAUTION! Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Reach through the elevator door to pull the tray out of the system.
- 3** Close the elevator door.

Are there trays remaining in the system?

- No, there are no trays remaining in the system. Restart the system. ► Review troubleshooting (223)
or,
- ► Remaining tray is in the slide dryer (216)
or,
- ► Remaining tray is in the slide stainer module (218)
or,
- ► Remaining tray is in the coverslipper (220)
or,
- ► Remaining tray is in the curing oven (222)

► Remaining tray is in the slide dryer

The following video demonstrates the process step-by-step. Continue reading the entire procedure for additional details.

⚠ CAUTION**Injury to operators and damage to the system**

Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.

- Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

NOTICE**Damage to the instrument**

If trays are removed from the slide dryer incorrectly, the module can be damaged and require engineer repair.

- Only remove trays from the slide dryer if the system cannot restart or if the module failed to detect the tray.

NOTICE: Newer slide dryers have delicate switch sensors. If the tray is not correctly lifted off this sensor, it can be damaged.



These photos show the switch sensor on the slide dryer door.

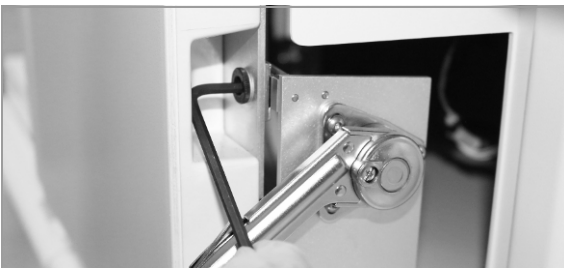


Utility film

(.hwl): [ua_RecoverTrayDryingOven/UA_RemoveFromDryingOven.hwl](#)

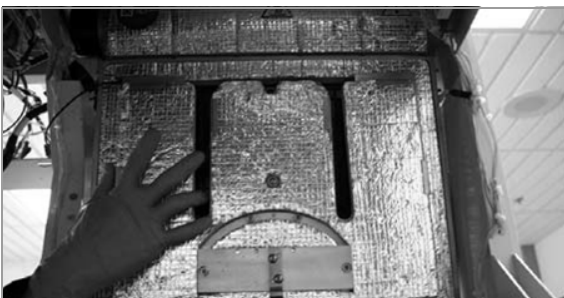
Title: Recovering a tray from the slide dryer

You need a 4 mm hex key to open the elevator door. After opening the elevator door, you can reach into the system to open the slide dryer.



- 1 CAUTION!** Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the slide dryer.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Open the slide dryer, reaching through the elevator door to grasp the slide dryer door.



- 3 With one hand, pull down the slide dryer door until it fully opens. Do not use excessive force.



- 4 With the other hand, lift the tray up and to the back of the system. Make sure to avoid contact with the switch sensor and tray arms. Gently pull the tray out of the system.
- 5 Gently close the slide dryer door.

Are there trays remaining in the system?

- No, there are no trays remaining in the system. Restart the system. ► Review troubleshooting (223)
or,
- ► Remaining tray is in the garage (215)
or,
- ► Remaining tray is in the slide stainer module (218)
or,
- ► Remaining tray is in the coverslipper (220)
or,
- ► Remaining tray is in the curing oven (222)

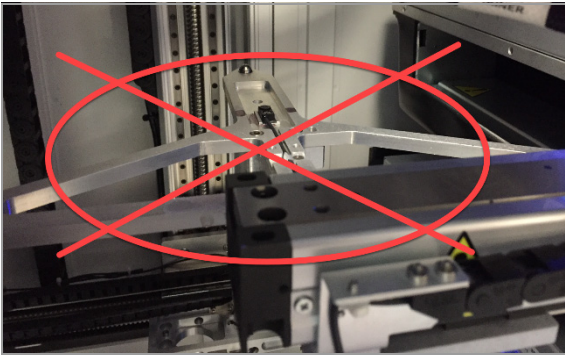
► Remaining tray is in the slide stainer module

The following video demonstrates the process step-by-step. Continue reading the entire procedure for additional details.

Utility film

(.hwl): [ua_RecoverTrayStainers/UA_RemoveFromStainers.hwl](#)

Title: Recovering trays from the slide stainer module



⚠ WARNING

Damage to the stainer or components

Pulling out a tray or moving the stainer mount arms before all obstacles have been cleared can damage the stainer and other components.

- ▶ Wait to push or pull the stainer mount arms or grab and pull the tray until all obstructions are cleared and the moving parts are stopped.

⚠ CAUTION

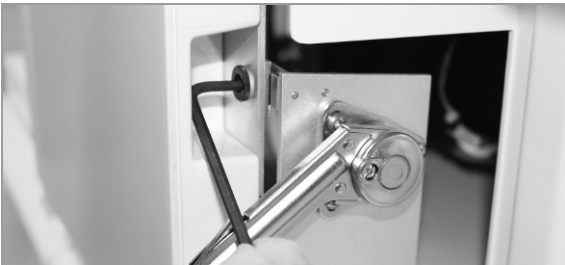
Injury to operators and damage to the system

Contact with the system without powering off the system and without waiting 20 minutes can result in a serious burn as some modules may be hot.

- ▶ Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

You need a 4 mm hex key to open the elevator door, and the stainer crank tool for the stainer module release. After opening the elevator door, you can reach into the system to open the stainer door.

Prepare wet paper towels in case of spills or wet trays that are stuck in a stainer module.



- 1 CAUTION!** Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the slide dryer.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2 CAUTION!** Do not push or pull the stainer mount arms or grab and pull the tray. Use the crank to bring the tray out of the stainer.

Insert the stainer crank into the stainer release.

- ❶ If you do not have the stainer crank, you can use a 2 mm hex key instead.



Are there trays remaining in the system?

- 3 Turn the crank clockwise until the tray and the tray mount are fully out of the stainer.
 - ❶ Note that it takes some time to move the tray completely out.
- 4 Remove the tray from the stainer and carefully take it out of the system.
- 5 Reinsert the stainer crank into the stainer release.
- 6 Turn the stainer crank counterclockwise until the tray mount is inside the stainer.

- No, there are no trays remaining in the system. Restart the system. ► Review troubleshooting (223)
or,
- ► Remaining tray is in the garage (215)
or,
- ► Remaining tray is in the slide dryer (216)
or,
- ► Remaining tray is in the coverslipper (220)
or,
- ► Remaining tray is in the curing oven (222)

► Remaining tray is in the coverslipper

The following video demonstrates the process step-by-step. Continue reading the entire procedure for additional details.

⚠ CAUTION

Injury to operators and damage to the system

- Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.
Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

Utility film

(.hwl): [ua_RecoverTrayCoverslipper/ua_RecoverTrayCoverslipper.hwl](#)

Title: Recovering a tray from the coverslipper access area

You need a 4 mm hex key to open the elevator door. When the door is open, turn the coverslipper's air release valve counterclockwise to lower the tray out of the coverslipper, and then turn it clockwise to open the valve.



- 1 CAUTION!** Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the coverslipper.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Locate the air relief valve to the right of the elevator opening.



- 3** To lower the tray, close the blue air relief valve by turning it 90 degrees.

→ Releasing the air from the coverslipper lowers the tray safely.



- 4** Carefully pull out the tray from the coverslipper.

- 5 CAUTION!** If you do not open the air relief valve after retrieving the tray, the coverslipper will not initialize properly on system restart.

Open the air relief valve by turning the air relief valve back to its original position.

Are there trays remaining in the system?

- No, there are no trays remaining in the system. Restart the system. ► Review troubleshooting (223)
or,
- ► Remaining tray is in the garage (215)
or,
- ► Remaining tray is in the slide dryer (216)
or,
- ► Remaining tray is in the slide stainer module (218)
or,
- ► Remaining tray is in the curing oven (222)

► Remaining tray is in the curing oven

The following video demonstrates the process step-by-step. Continue reading the entire procedure for additional details.

⚠ CAUTION**Injury to operators and damage to the system**

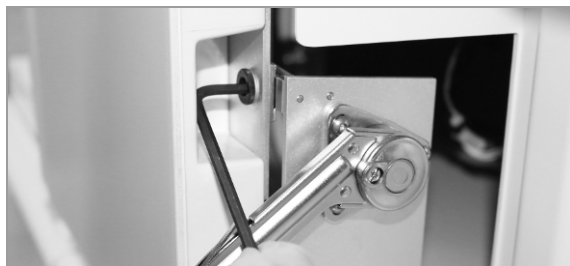
- Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn as some modules may be hot.
Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the garage.

Utility film

(.hwls): [ua_RecoverTrayCuringOven/UA_removeFromCuringOven.hwls](#)

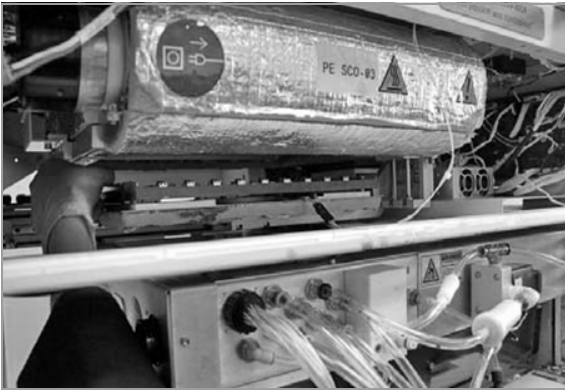
Title: Recovering a tray from the curing oven

You need a 4 mm hex key to open the elevator door. The curing oven door opens automatically after the system is shut down.



- 1 CAUTION!** Wait at least 20 minutes after the system has been shut down before manually recovering a tray from the curing oven.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



Are there trays remaining in the system?

- 2 On the top left of the system, locate the tray inside the curing oven.
 - ❶ The curing oven door opens automatically after the system is shut down.
- 3 Lift the tray up and out of the curing oven carefully to remove it from the system.

- No, there are no trays remaining in the system. Restart the system. ► Review troubleshooting (223)
or,
- ► Remaining tray is in the garage (215)
or,
- ► Remaining tray is in the slide dryer (216)
or,
- ► Remaining tray is in the slide stainer module (218)
or,
- ► Remaining tray is in the coverslipper (220)
or,
- ► Remaining tray is in the curing oven (222)

► Review troubleshooting

Yes. The trays have been recovered and the system is working.

- 1 After all trays have been removed from the system, ensure all panels and doors are closed.
- 2 Review a summary of your performed troubleshooting steps below.
→ {{ExecutedTroubleshooterSteps}}

► Contact Roche Service

- 1 If you cannot recover a tray, or the system is unresponsive, contact your Roche Service representative.

Troubleshooting tray recovery

If the system turns off unexpectedly or the user interface freezes or experiences an error, you can manually remove trays from the transportation fork and use the auto-recovery to deliver the remaining trays to the portal upon restarting the system.

In this section

About tray recovery (224)

Turning off the system (225)

Removing a tray from the transportation system and restarting the system (226)

Determining the location of remaining trays (228)

Recovering a tray from the slide dryer (229)

Recovering a tray from the slide stainer module (230)

Recovering a tray from the coverslipper module (232)

Recovering a tray from the curing oven (233)

Recovering a tray from the garage (235)

About tray recovery

To recover trays, you first turn off the system power, then remove all trays from the transportation forks, and then restart the system. This activates auto-recovery to move all the trays inside the system to the tray portals.

If all the trays were not recovered from the tray portals after restarting the system, or if it is not possible to restart the system, you can recover the trays manually from a different part of the system. You must turn off the power to the system completely before manually removing trays.

The following tasks detail the procedures for shutting down the system, restarting, and recovering trays from different modules in the system.

• Related topics

- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Turning off the system

Turning off and then restarting the system usually recovers all trays and delivers them to the tray portals.

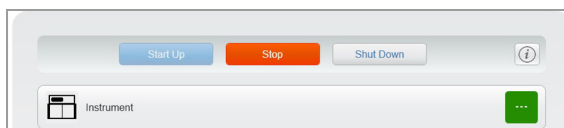
Do not carry out this tray recovery procedure unless Roche Diagnostics has trained you to do so.

⚠ WARNING

Injury to operators and damage to the system

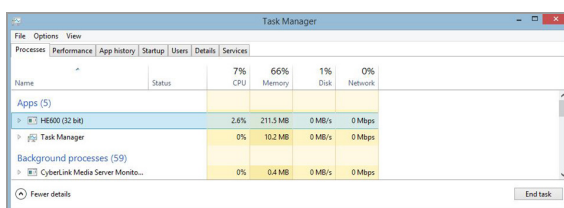
Contact with the system without powering off the system and waiting 20 minutes can result in a serious burn because some modules can be hot.

- ▶ Power off the computer and system prior to manually removing any trays.
- ▶ Wait at least 20 minutes after powering off the system to allow all trays in the slide dryer, stainers, and curing oven to cool before handling trays manually.
- ▶ Wait 20 minutes after powering off the system before touching any internal components of the system.



▶ To turn off the system

- 1 If the system is running, in the **Instrument view**, choose the **Stop** button.
- 2 If the user application is non-responsive, open the **Task Manager**. Press Ctrl+Alt+Delete on the keyboard, or press and hold the Windows taskbar at the bottom of the screen and choose **Task Manager**.
 - ❶ Do not shut down the system by choosing **Shut Down** or the red **X**. A full shut down initiates the 60 minute cleaning cycle and delays tray recovery. If it has been more the 24 hours since the last cleaning cycle, the cleaning cycle will run when you restart the system.
 - Windows Task Manager displays.
- 3 In the Windows **Task Manager** list, choose **HE600 (32 bit)**, and then choose **End Task**.
 - The monitor displays a purple Windows screen.
- 4 Choose the Windows icon in the lower left corner of the screen.
- 5 In the menu that displays in the lower left corner, choose  and then **Shut down**.





- 6 On the left-hand side of the system, turn the power switch from I to O.
- 7 Wait 20 minutes for the electricity to discharge and the trays and modules to cool.
- 8 Call Roche support to let them know you experienced a critical system error.
- 9 Now continue with “Removing trays from the transportation system and restarting the system” (➤ 226).

➤ Related topics

- About tray recovery (224)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Removing a tray from the transportation system and restarting the system

After you have shut down the system, remove any tray from the transportation system, and restart the system to activate auto-recovery.

In an extreme situation, (for example, a fluid leak, fire, power outage, transport error, or computer issue) the system might not be able to restart. Complete this task to determine if you can restart the system after turning it off.

The system then moves all remaining trays to the tray portals.



Before you begin the procedure, make sure that you have the following materials available:

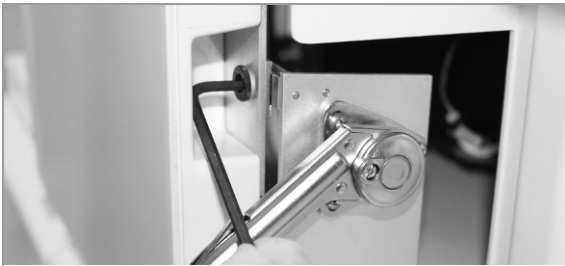
- ☐ A 4 mm hex key to open the elevator door



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Turn off the system.
- Turning off the system (225)

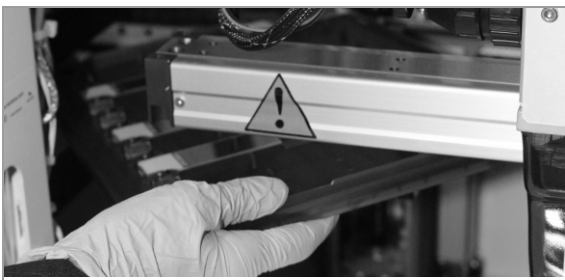
► **To remove trays from the transportation system and restart**



- 1 **CAUTION!** Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the transportation system.

Place a 4mm hex key into the slot on the bottom right of the elevator door.

- 2 Rotate the hex key to unlock the elevator door.
→ The elevator door is opened.



- 3 Gently lift the slide tray that is on the transportation fork to bring the tray out of the system.

- 4 Close the elevator door.

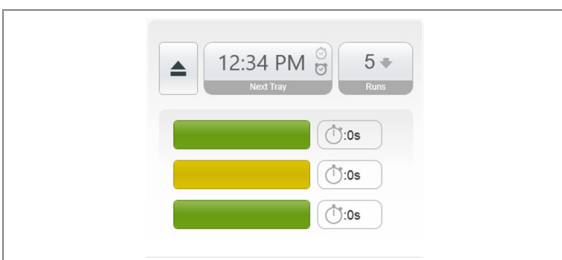


- 5 Restart the system by turning the power switch from O to I.

→ The auto-recovery feature automatically moves all remaining trays to the tray portals.



- 6 Remove all trays from the tray portals.



- 7 To determine if additional trays are in the system, choose the **Operating** tab, and view the number in the **Runs** box.

- 8 If the number of trays in the **Runs** box is higher than 0, then continue with “Determining the location of remaining trays” (☞ 228).

• Related topics

- About tray recovery (224)
- Turning off the system (225)
- Determining the location of remaining trays (228)

Determining the location of remaining trays

If all the trays were not recovered after restarting the system or if the system could not be restarted, you need to determine where the remaining trays are.

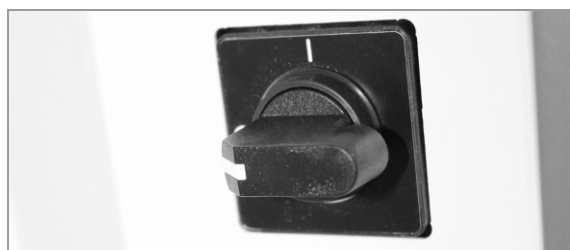
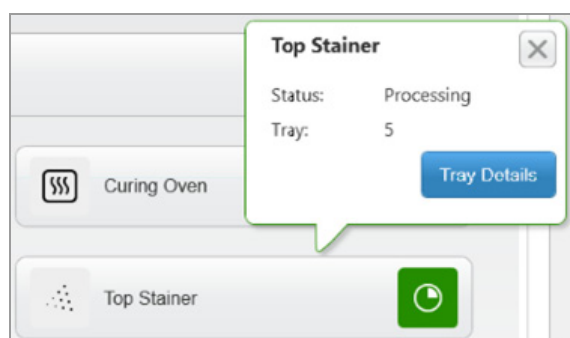
After using the **Instrument** and **Operating** tabs to determine which modules you have to recover trays from, you must power down the system again to prepare to recover the trays.



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Remove trays from the transportation system and restart the system.
- Removing a tray from the transportation system and restarting the system (226)

► To determine the location of remaining trays



- 1 To determine the location of the remaining trays, choose the **Instrument** tab, and then choose each of the system modules.
 - A dialog box displays to indicate which tray is present in the module (if any).
- 2 Note the locations of the trays in each of the modules.
 - ❶ If the total number of trays shown in the **Operating** tab **Runs** box is larger than the total number of trays shown in each of the modules, the additional trays are probably in the garage.
- 3 To prepare to recover trays, turn off the system using **Task Manager** and turn the power switch from I to O. For more information, see "Turning off the system" (• 225).
 - ❶ Do not use the **Shut Down** button to shut down the system.

- 4 Now continue with the topic corresponding to the location of the remaining trays:
- 'Recovering a tray from the slide dryer' (🔗 229)
 - 'Recovering trays from the slide stainer module' (🔗 230)
 - 'Recovering a tray from the coverslipper access area' (🔗 232)
 - 'Recovering a tray from the curing oven' (🔗 233)
 - 'Recovering a tray from the garage' (🔗 235)

🔗 **Related topics**

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)

Recovering a tray from the slide dryer

If the remaining tray is in the slide dryer, you can recover it by opening the elevator door, and then opening the slide dryer door.



Before you begin the procedure, make sure that you have the following materials available:

- ☐ A 4 mm hex key to open the elevator door



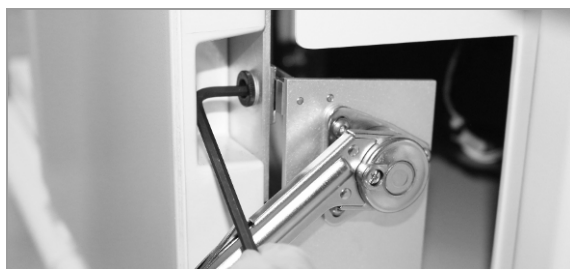
Make sure that the following prerequisites are completed before starting this procedure:

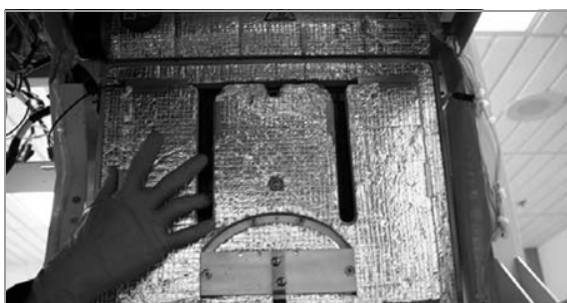
- ☐ Locate the tray in the Operating tab and turn off the system.
- 🔗 Determining the location of remaining trays (228)

► To recover a tray from the slide dryer

- 1 **CAUTION!** Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the slide dryer.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.





- 2 Reach through the elevator door to grasp the slide dryer door.



- 3 Pull down the slide dryer door until it fully opens.



- 4 Lift up the tray slightly, and pull it out of the system.

Related topics

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Recovering a tray from the slide stainer module

If the remaining tray is in the slide stainer module, you can recover it by opening the elevator door, and then opening the slide stainer door.



Before you begin the procedure, make sure that you have the following materials available:

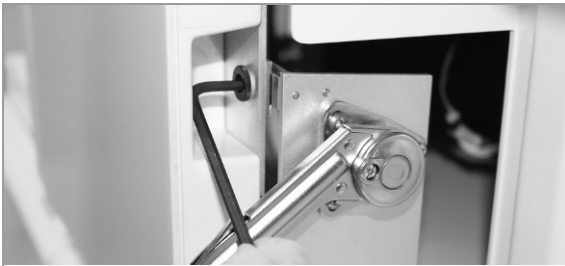
- ☐ A 4 mm hex key to open the elevator door.
- ☐ A stainer crank to open the slide stainer door.



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Locate the tray in the Operating tab and turn off the system.
- Determining the location of remaining trays (228)

► **To recover trays from the slide stainer module**



- 1** CAUTION! Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the slide stainer module.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Push down the slide stainer door to open it.



- 3** CAUTION! Do not push or pull the stainer mount arms or grab and pull the tray. Use the crank to bring the tray out of the stainer.

Insert the stainer crank into the stainer release.



- 4** Turn the crank clockwise until the tray and the tray mount are fully out of the stainer.



- 5** Remove the tray from the stainer, and carefully take it out of the system.

❗ There might be extra fluid in the tray.

- 6** Reinsert the stainer crank into the stainer release.

- 7** Turn the stainer crank counterclockwise until the tray mount is inside the stainer.

• Related topics

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Recovering a tray from the coverslipper module

If the remaining tray is in the coverslipper module, you can recover it by opening the elevator door, and then closing the air relief valve to lower the tray.



Before you begin the procedure, make sure that you have the following materials available:

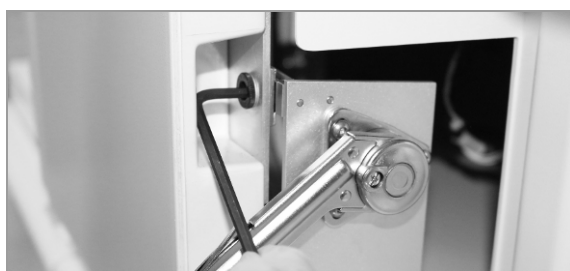
- ☐ A 4 mm hex key to open the elevator door.



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Locate the tray in the Operating tab and turn off the system.
- Determining the location of remaining trays (228)

► To recover a tray from the coverslipper access area



- 1** CAUTION! Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the coverslipper.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Locate the air relief valve to the right of the elevator door opening.



- 3 To lower the tray, close the blue air relief valve by turning it 90 degrees.
 - Releasing the air from the coverslipper lowers the tray safely.



- 4 Carefully pull out the tray from the coverslipper.
 - ❗ Do not pull the tray upwards when removing it. Lifting the tray upwards could damage the coverslipper heads.
- 5 CAUTION! If you do not open the air relief valve to raise the tray mount back into the coverslipper after retrieving the tray, the coverslipper will not work correctly.

Open the air relief valve, and raise the tray mount by turning the air relief valve back to its original position.

• Related topics

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Recovering a tray from the curing oven

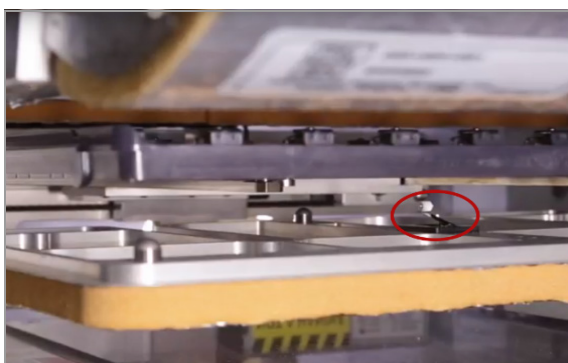
If the remaining tray is in the curing oven, you can recover it by opening the elevator door, and then reaching up to the top left of the system to retrieve the tray.

⚠ WARNING

Damage to the module

If a tray is incorrectly removed from the curing oven, the module can be damaged and require an engineer to repair it.

- ▶ Only remove trays from the curing oven if the system cannot restart or if the module failed to detect the tray.



Newer ovens have delicate switch sensors. If the tray is not properly lifted off of this sensor, it can be damaged.



Before you begin the procedure, make sure that you have the following materials available:

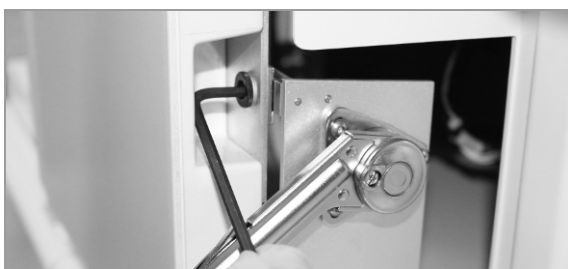
- ☐ A 4 mm hex key to open the elevator door.



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Locate the tray in the Operating tab and turn off the system.
- Determining the location of remaining trays (228)

► To recover a tray from the curing oven



- 1 **CAUTION!** Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the curing oven.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2 On the top right of the system, locate the tray inside the curing oven.
 - ❶ The curing oven door opens automatically after the system is turned off.
- 3 Lift the tray up and out of the curing oven carefully to remove it from the system.

• Related topics

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Recovering a tray from the garage

If the remaining tray is in the garage, you can recover it through the elevator door.



Before you begin the procedure, make sure that you have the following materials available:

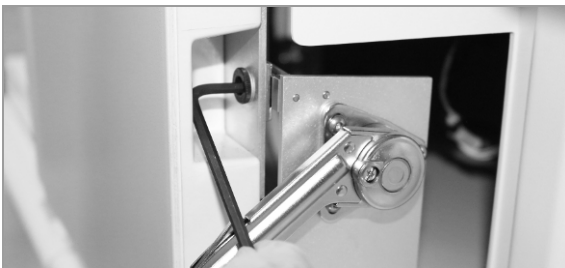
- ☐ A 4 mm hex key to open the elevator door



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Determine the remaining number of trays and locations in the instrument.
- Determining the location of remaining trays (228)

► To recover a tray from the garage



- 1** CAUTION! Wait at least 20 minutes after the system has been turned off before manually recovering a tray from the garage.

Place the hex key into the slot on the bottom right of the elevator door, and turn the hex key to open the door.



- 2** Reach through the elevator door to the garage to pull the tray out of the system.
- 3** Close the elevator door.

• Related topics

- About tray recovery (224)
- Turning off the system (225)
- Removing a tray from the transportation system and restarting the system (226)
- Determining the location of remaining trays (228)

Troubleshooting coverslip issues

In this section

Identifying coverslip issues (236)

Removing coverslips from slides (237)

Identifying coverslip issues

If you chose a protocol to coverslip slides, make sure that coverslips have been correctly applied to the slides after unloading them.



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Slides are processed with a protocol that includes coverslipping.

► To inspect coverslips

- 1 Check each slide for the following:
 - Coverslips that are misaligned with the slides
 - Double or missing coverslips
 - Coverslips that are not adhering to the tissue or upside down
 - Bubbles between coverslip and tissue
 - ❗ You can remove and reapply coverslips as necessary.
- 2 If any of these issues occur often, contact your Roche service representative. Adjustments to the coverslipper might be needed to restore proper operation.

•📖 Related topics

- Removing coverslips from slides (237)
- Unloading a tray from a portal (117)



Removing coverslips from slides

If you need to run a sample through the VENTANA HE 600 system again, you need to remove the coverslip from the slide first.

You can use a hot plate and forceps to remove a coverslip from a slide.

The following video demonstrates the process step-by-step. Continue reading the entire procedure for additional details.

Utility film

(.hwls): [ua_RemoveCoverslips/UA_RemovingCoverslips.hwls](#)

Title: Removing coverslips from slides

⚠ CAUTION

Burns from direct contact with hot plate

Direct contact with the hot plate can result in a severe burn.

- ▶ Proceed with caution when using the hot plate.
Use metal forceps to move the coverslip and slide and wear protective gloves.



Make sure that the following supplies are ready before removing coverslips from slides:

- ☐ Hot plate
- ☐ Metal forceps



Make sure that the following prerequisites are completed before starting this procedure:

- ☐ Before performing this procedure on production slides, validate the procedure for your lab.

▶ To remove coverslips from slides

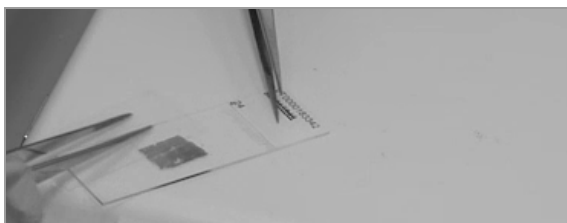
- 1 Turn on a hot plate to the medium setting, 100 °C.





2 Place the slide on the hot plate for 10 seconds or more.

- ❶ The longer a coverslip has been on a slide, the longer it takes to remove the coverslip.



3 CAUTION! Do not lift up on the coverslip, or it may shatter, and be careful not to damage the tissue.

Remove the coverslip by sliding it down the slide using forceps.



4 Continue to slide the coverslip down and off the slide with the forceps to remove it.

- ❶ If there is additional mounting media on the slide, allow the slide to cool, then soak it in Xylene for 30 seconds.

Error recovery procedures

In this section

Restarting the user interface if software unresponsive (239)

Disabling a stainer module (240)

Ejecting coverslip cassettes (241)

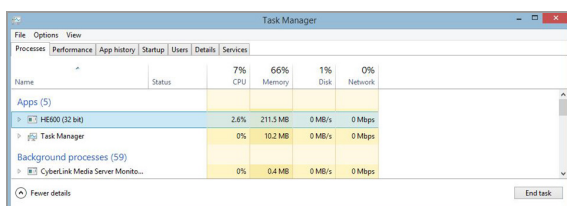
Restarting the user interface if software unresponsive

If the user interface freezes, and choosing tabs or buttons does not resolve the issue, you can restart the user interface by using Windows Task Manager.

 The screen shots in the following procedure illustrate the steps for a system running Windows 8. If your system has Windows 10 installed, some Windows screen elements have a different appearance.

► To restart the user interface

- 1 To open **Task Manager**, press Ctrl+Alt+Delete on the keyboard, or press and hold the Windows taskbar at the bottom of the screen and choose **Task Manager**.
→ Windows Task Manager displays.
- 2 In the Windows **Task Manager** list, choose **HE600 (32 bit)** and then choose **End Task**.
- 3 Choose the Windows icon in the lower left corner of the screen.
- 4 In the menu that displays in the lower left corner, choose  and then **Shut Down**.
- 5 On the left-hand side of the system, turn the power switch from I to O.





- 6 Restart the system by turning the power switch from O to I.
→ The user interface restarts when the system is turned back on.

Related topics

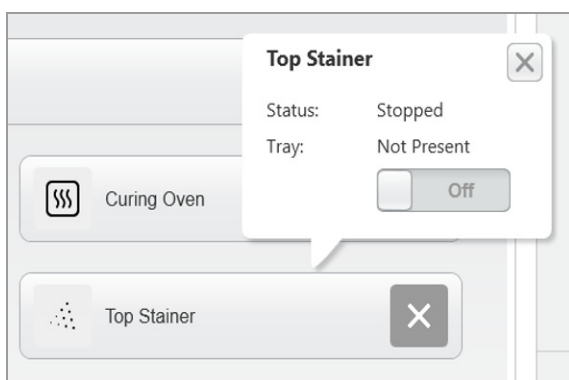
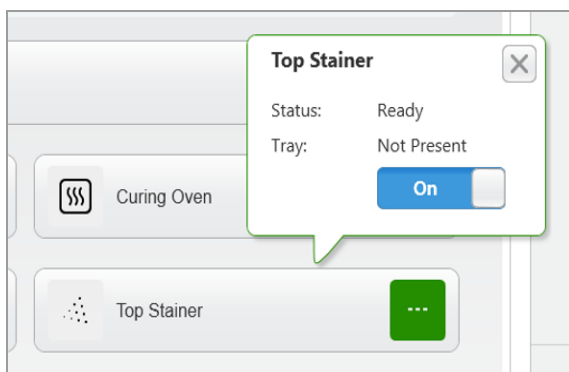
- Viewing and filtering the error log (193)
- List of error messages (195)

Disabling a stainer module

If you suspect that staining issues are specific to a particular stainer module, you can disable the stainer module until the issue is resolved. Follow this procedure with guidance from Roche support.

► To disable a stainer module

- 1 Contact Roche support to determine which module needs attention.
- 2 Navigate to the **Instrument** view, and choose the stainer that needs to be disabled.
→ A dialog box displays, showing that the stainer is enabled.
- 3 In the dialog box, choose **Off** to disable the stainer module.
→ The dialog box shows the stainer is off and the stainer is disabled.



Ejecting coverslip cassettes

If needed, you can eject the expired cassette by choosing **Load Cassette** to move the expired cassette to the empty cassette position.

The coverslipper module can hold up to 7 cassettes.

NOTICE

Possible staining issues

If you eject coverslip cassettes while trays are running in the system, the trays will be aborted.

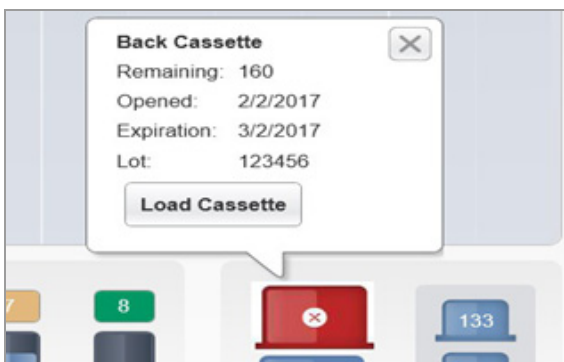
- ▶ Complete this task when no trays are processing in the system.

▶ To eject expired coverslip cassettes

- 1 Open the door to the coverslipper module.



- 2 In the **Operating** view, choose the expired cassette, and then choose **Load Cassette**.
- 3 Continue to choose **Load Cassette** until the expired cassette has been ejected.



- 4 Remove empty coverslip cassettes from the waste bin as they are available, and replace them with new ones quickly.
 - ❶ If you complete this step while trays are processing, they will be aborted.



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Open source license notifications and notices

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