MagNA Pure 24 System

Maintenance Guide Version 1.3
Software version 1.2

For in vitro diagnostic use

Publication information

Publication version	Software version	Revision date	Change description
1.0	1.1	June 2018	First version
1.1	1.1	January 2021	IVDR update For a detailed change description, see the User Assistance.
1.2	1.2	July 2021	The maintenance settings were expanded and updated. For a detailed change description, see the User Assistance.
1.3	1.2	May 2023	New cover page, updated colors, and fonts. Updated wording in the front matter of the publication. Restart the system after database backup and archiving. For a detailed change description, see the User Assistance.

Revision history

Edition notice

This publication is intended for users of the MagNA Pure 24 System.

Every effort has been made to ensure that all the information contained in this publication is correct at the time of publishing. However, the manufacturer of this product may need to update the publication information as output of product surveillance activities, leading to a new version of this publication.

Trademarks

The following trademarks are acknowledged:

MAGNA PURE and LIGHTCYCLER are trademarks of Roche.

All other trademarks are the property of their respective owners.

Contact addresses

Roche Molecular Systems, Inc.
1080 US Highway 202 South
Branchburg, NJ 08876
USA
Made in Switzerland

Roche Diagnostics GmbH
Sandhofer Strasse 116
68305 Mannheim
Germany
Made in Switzerland

Distributed in the United States by:
Roche Diagnostics
9115 Hague Road
Indianapolis, Indiana
USA

Roche affiliates

A list of all Roche affiliates can be found at:

www.roche.com/about/business/roche_worldwide.htm

eLabDoc

Electronic user documentation can be downloaded using the eLabDoc e-service on **navify**® Portal:

navifyportal.roche.com

For more information, contact your local affiliate or Roche Service representative.

Table of contents

Preface

Use this publication together with the MagNA Pure 24 System User Assistance.

Intended use

The MagNA Pure 24 System is an automated nucleic acid purification system consisting of the MagNA Pure 24 instrument, software, consumables and reagents. The MagNA Pure 24 System is intended for use by professional users for the purification of nucleic acids from biological samples for *in vitro* diagnostic purposes.

Symbols and abbreviations

Product names

Except where the context clearly indicates otherwise, the following product names and descriptors are used.

Product name	Descriptor
MagNA Pure 24 System	system
MagNA Pure 24 Software	software
MagNA Pure 24 Instrument	instrument
MagNA Pure 24 Archive Viewer	archive viewer

Product names

Symbols used in the publication

Symbol	Explanation
•	List item.
	Related topics containing further information.
	Tip. Extra information on correct use or useful hints.
▶	Start of a task.
	Extra information within a task.
➔	Result of an action within a task.
	Frequency of a task.
	Duration of a task.
	Materials that are required for a task.
	Prerequisites of a task.
	Topic. Used in cross-references to topics.
▶	Task. Used in cross-references to tasks.
	Figure. Used in figure titles and cross-references to figures.
	Table. Used in table titles and cross-references to tables.
√xy	Equation. Used in cross-references to equations.
	Code example. Used in code titles and cross-references to codes.

Symbols used in the publication

Abbreviations

The following abbreviations are used.

Abbreviation	Definition
ANSI	American National Standards Institute
CSA	Canadian Standards Association
EC	European Community
EN	European standard
FFPE	Formalin-fixed paraffin-embedded
FFPET	Formalin-fixed paraffin-embedded tissue

Abbreviations

Abbreviation	Definition
IC	Internal control
IEC	International Electrical Commission
IVD	In vitro diagnostic
IVDR	In vitro diagnostics regulation
LIS	Laboratory information system
MGP	Magnetic glass particles
n/a	not applicable
PCR	Polymerase chain reaction
UL	Underwriters Laboratories Inc.
WEEE	Waste Electrical and Electronic Equipment

Abbreviations

Maintenance overview

Maintenance actions ensure safe and reliable operation of the system.

For a definition of cleaning, decontamination, and disinfection, refer to the glossary in the User Assistance.

Periodic maintenance

To ensure that the system works properly and to reduce the risk of contamination, maintenance must be performed on regular intervals.

The system schedules the following periodic maintenance actions:

- Cleaning instrument
  (if configured; by default on demand only)
- UV decontamination
  (if configured; by default on demand only)
- Checking pipetter tightness
- Database backup
- Archiving

Periodic maintenance actions can be configured to be launched automatically or manually.

For each periodic maintenance action a time window can be defined, within which the maintenance action can be performed without being due yet (**Lead period**). The maintenance action is still counted as being performed on the scheduled due date. After the lead period is elapsed, the grace period starts (if configured) and the maintenance action becomes due.

For each periodic maintenance action a time window can be defined, within which the maintenance action must be performed (**Grace period**). If a time window is set, the maintenance action must be performed within the given grace period. For some maintenance actions, when the grace period has elapsed, the system is blocked. No runs can be performed until the overdue maintenance action is complete.

- Cleaning instrument (12)
- UV decontamination (29)
- Checking pipetter tightness (31)
- Backing up the database (34)
- Archiving data (37)
- For configuring maintenance settings, see the User Assistance.

On-demand maintenance

All periodic maintenance actions, except archiving, can also be performed on demand outside of their schedules on the **Monitoring > Maintenance** panel.

- For performing maintenance actions on demand, see the User Assistance.

Preventive maintenance

Your Roche Service representative performs preventive maintenance.

Allowed cleaning and decontamination solutions

Cleaning solutions

⚠ WARNING

Risk of fire and burns

Alcohol is a flammable substance.

- Keep all sources of ignition (such as sparks, flames, or heat) away from the system when you perform maintenance.
- When you use alcohol on or around the system, use no more than 20 mL at a time.

When cleaning the system, use substances that are listed below:

- Deionized or distilled water
- 70% ethanol p.a. or mikrozid®

Decontamination solutions

⚠ WARNING

Chemical reaction producing toxic gas

Mixing bleach or DNA AWAY™ Surface Decontaminant with reagents can result in a chemical reaction that produces a highly toxic gas.

- Do not allow reagents containing guanidine thiocyanate to contact sodium hypochlorite (bleach) solution or acids.

NOTICE

Damage to the instrument due to inappropriate use of decontamination solutions

The recommended decontamination solutions are highly corrosive. Excessive use may damage the affected surfaces.

- Follow the outlined cleaning and decontamination procedures exactly.
- Use only the recommended decontamination solutions.

When decontaminating the instrument, use substances that are listed below:

- DNA AWAY™ Surface Decontaminant (Molecular BioProducts, Inc.)
- biodelta's LTK-008™
- RNaseZAP™ (Sigma-Aldrich, Inc.)
- DNAZap™ Solutions (Fisher Scientific)
- DNA-EX™ (Genaxis Biotechnology)

Alternatively, use a freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10) where indicated.

Cleaning instrument

To reduce the risk of contamination, you must clean the instrument regularly.

⚠ WARNING

Chemical reaction producing toxic gas

Mixing bleach or DNA AWAY™ Surface Decontaminant with reagents can result in a chemical reaction that produces a highly toxic gas.

- Do not allow reagents containing guanidine thiocyanate to contact sodium hypochlorite (bleach) solution or acids.

- •Do not use technical or denatured ethanol for preparation of the cleaning solution.
- Instead of deionized water, you can use distilled or purified water.
- Do not spray liquid directly on any part of the system.
- Moisten the lint-free cloths outside the system and wipe the surfaces and parts as described in these procedures.
- Take care when applying liquid to a lint-free cloth. The cloth should be damp, not saturated, to prevent dripping.
- Always clean the accessories away from the instrument.
- Before using bleach solution, read the precautions on the Safety Data Sheet of the manufacturer.
- Use bleach solution or decontamination solution where indicated only.
- Before using decontamination solutions, read the precautions on the bottle labels carefully. For more information or a Safety Data Sheet, refer to manufacturers' websites.
- Change lab gloves after each cleaning step.
- Dispose of the material as potentially infective material.

In this section

Cleaning the instrument

You must clean the instrument regularly.

When indicated by the software, but at least weekly.

30 min

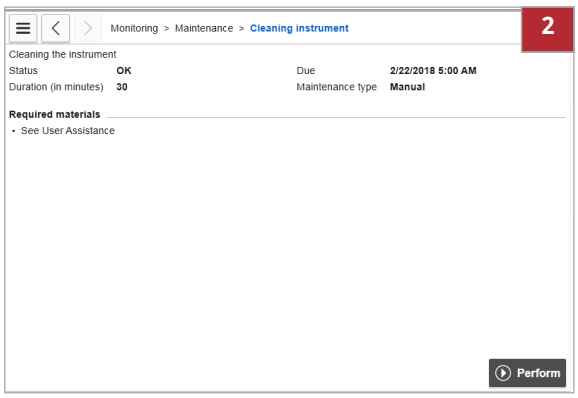
- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®
- ☐ Decontamination solution

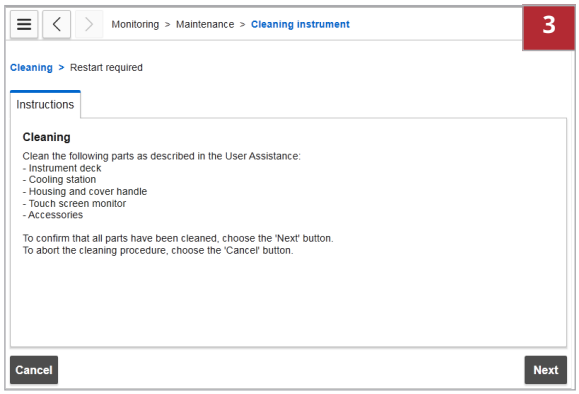
- ☐ **Cleaning instrument** task displayed
- ☐ All supplies are unloaded

To clean the instrument

1 Choose the **Cleaning instrument** task button.
➔ The maintenance wizard is displayed.

2 Choose the **Perform** button.

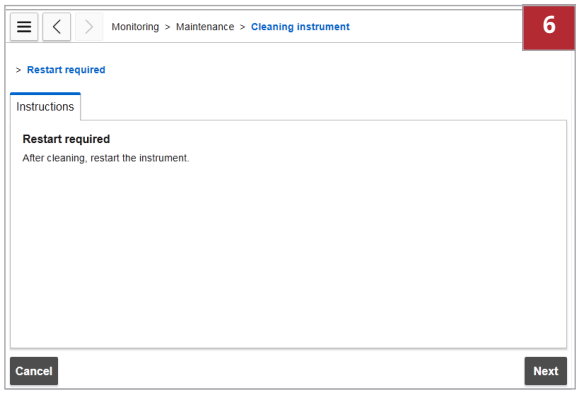




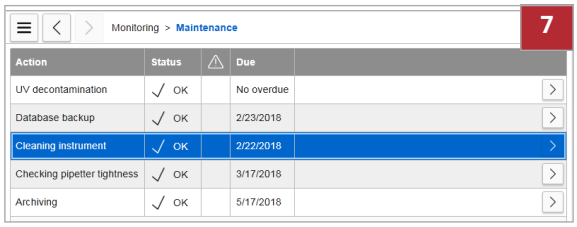
3 Clean the outside and the inside of the instrument as described in the cleaning procedures for the instrument.

4 Clean all accessories as described in the cleaning procedures for accessories.

5 When all cleaning is complete, choose the **Next** button.



6 After cleaning, it is recommended to restart the system.
To complete the **Cleaning instrument** task, choose the **Next** button.



7 Choose **Monitoring > Maintenance** to check completion of the maintenance action.

ⓘ Successfully completed maintenance actions have status **OK**. The next due date is listed.

Related topics

- Cleaning procedures for the instrument (14)
- Cleaning procedures for accessories (19)
- Overview of cleaning (27)

Cleaning procedures for the instrument

The following section describes cleaning of the instrument in detail.

In this section

Cleaning the outside of the instrument

You must clean the outside of the instrument regularly (housing, cover outside, and touch screen monitor).

Checking around the instrument

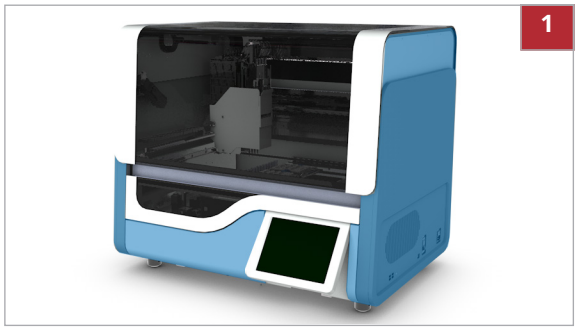
You must check the area around each instrument regularly to ensure that air flow is unrestricted and that books, papers, or other supplies are not interfering with the free air flow.

Weekly

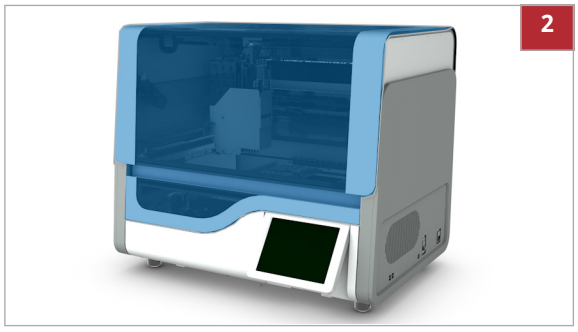
- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ 70% ethanol p.a.

- ☐ All supplies are unloaded
- ☐ Instrument is turned off

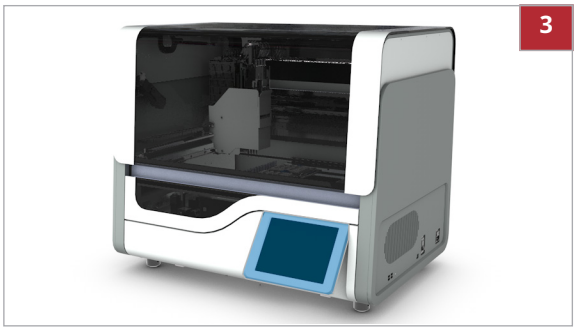
To clean the outside of the instrument



1 Clean the housing of the instrument with a lint-free cloth moistened with 70% ethanol.



2 Clean the cover of the instrument with a lint-free cloth moistened with 70% ethanol.



3 Clean the touch screen monitor with a lint-free cloth moistened with 70% ethanol.

Cleaning the inside of the instrument

Clean the inside of the instrument regularly.

Do not clean the inside of the instrument using bleach as it can lead to corrosion.

Spillage

If a considerable amount of sample or reagent was spilled inside the instrument, contact your Roche Service representative.

Decontaminating the instrument

This cleaning procedure also applies to the situation when it is necessary to decontaminate the instrument.

UV decontamination

The instrument has a built-in UV decontamination function.

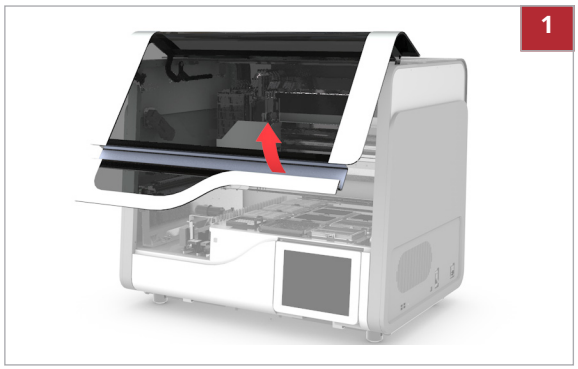
UV decontamination (29)

Weekly

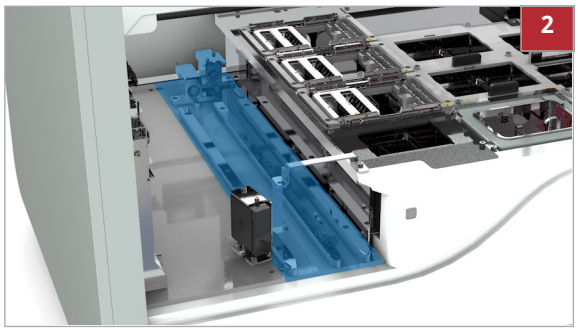
- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a.
- ☐ Decontamination solution

- ☐ All supplies are unloaded

To clean the inside of the instrument



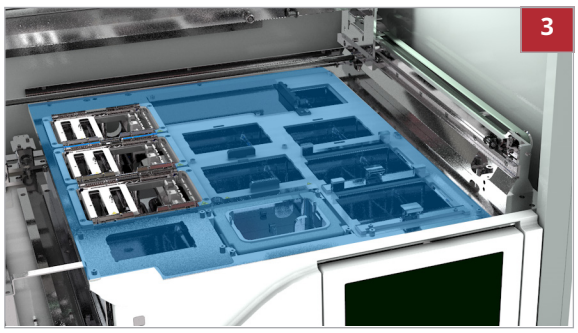
1 Open the instrument cover.



2 WARNING! Risk of personal injury.
Contact with sharp objects or edges may result in personal injury and infection.

Clean the rack slots:

- Moisten lint-free cloths with deionized water.
- Clean the rack slots. Work from the rear of the instrument towards the front.
- Repeat the cleaning procedure using lint-free cloths moistened with 70% ethanol.
- Repeat the cleaning procedure using lint-free cloths moistened with decontamination solution.
- Repeat the cleaning procedure using lint-free cloths moistened with deionized water.

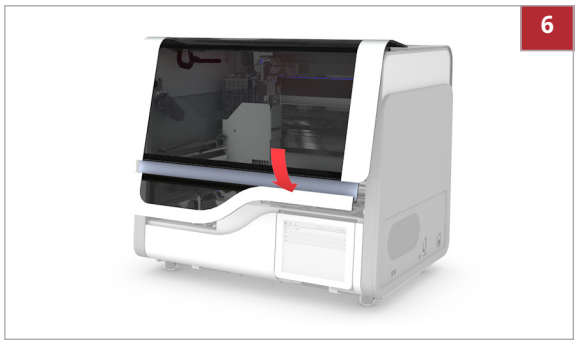


3 Clean the instrument deck:

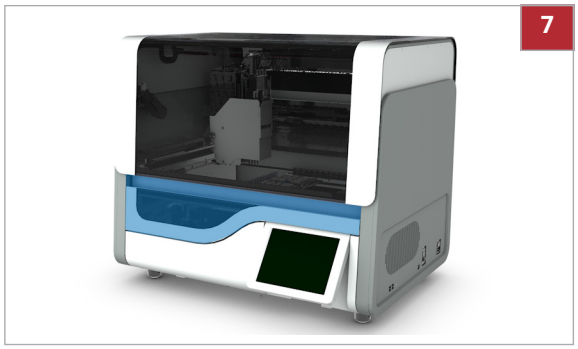
- Moisten lint-free cloths with deionized water.
- Clean all surfaces of the instrument deck. Work from the rear of the instrument towards the front.
- Repeat the cleaning procedure using lint-free cloths moistened with 70% ethanol.
- Repeat the cleaning procedure using lint-free cloths moistened with decontamination solution.
- Repeat the cleaning procedure using lint-free cloths moistened with deionized water.

4 Clean the instrument stations except the processing stations:
- Moisten lint-free cloths with deionized water.
- Clean the instrument stations except the processing stations. Work from the rear of the instrument towards the front.
- Repeat the cleaning procedure using lint-free cloths moistened with 70% ethanol.
- Repeat the cleaning procedure using lint-free cloths moistened with decontamination solution.
- Repeat the cleaning procedure using lint-free cloths moistened with deionized water.

5 Clean the inside of the instrument cover:
- Moisten lint-free cloths with deionized water.
- Clean the inside of the instrument cover.
- Repeat the cleaning procedure using lint-free cloths moistened with 70% ethanol.



6 Close the instrument cover.



7 Clean the handle of the instrument cover:
- Moisten lint-free cloths with deionized water.
- Clean the handle of the instrument cover.
- Repeat the cleaning procedure using lint-free cloths moistened with 70% ethanol.
- Repeat the cleaning procedure using lint-free cloths moistened with decontamination solution.
- Repeat the cleaning procedure using lint-free cloths moistened with deionized water.

Cleaning procedures for accessories

The following section describes cleaning of the accessories in detail.

NOTICE

Damage to the accessories due to wrong cleaning

Cleaning in the dishwasher or soaking in cleaning solutions may damage the accessory and/or the barcode label.

- Do not clean any accessory in the dishwasher.
- Do not soak accessories that have barcode labels in cleaning or decontamination solutions.

In this section

Cleaning the reagent rack, sample racks, and sample tube adapters

Clean the reagent rack, the sample racks, and the sample tube adapters regularly.

Disinfecting the reagent rack, sample racks, and sample tube adapters

To disinfect the reagent rack, the sample racks, or the sample tube adapters (e.g., after a spillage), also clean them as described below:

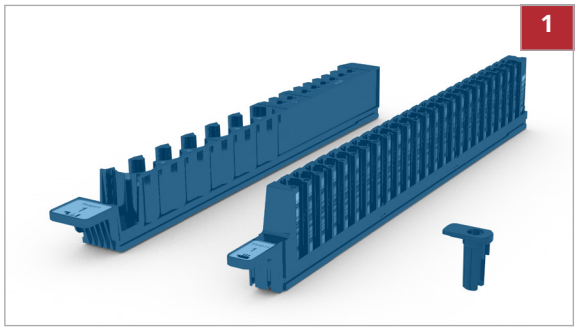
To clean the reagent rack, sample racks, and sample tube adapters ▶ (20)

Weekly

Approx. 3 min each

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®

▸ To clean the reagent rack, sample racks, and sample tube adapters



1 Clean the reagent rack, the sample racks, and the sample tube adapters with a lint-free cloth moistened with deionized or distilled water.

2 Clean the reagent rack, the sample racks, and the sample tube adapters with a lint-free cloth moistened with 70% ethanol or mikrozid®.

Cleaning processing station adapters

Clean the processing station adapters regularly.

Forgotten liquid waste insert

Always use a liquid waste insert together with each processing station adapter. To clean a processing station adapter in case of forgotten liquid waste insert, clean it as described in the following procedure:

To clean a processing station adapter (in case of forgotten liquid waste insert) ▸ (22)

Decontaminating processing station adapters

To decontaminate a processing station adapter (e.g., after a spillage), clean it as described in the following procedure:

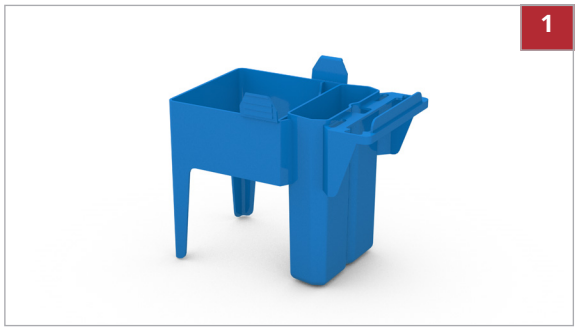
To clean a processing station adapter (in case of forgotten liquid waste insert) ▸ (22)

Weekly

Approx. 3 min each

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®

▸ To clean a processing station adapter



1 Clean the processing station adapter with a lint-free cloth moistened with deionized or distilled water.

2 Clean the processing station adapter with a lint-free cloth moistened with 70% ethanol or mikrozid®.

Cleaning processing station adapters (in case of forgotten liquid waste inserts)

Clean processing station adapters regularly.

Always use a liquid waste insert together with each processing station adapter. To clean a processing station adapter in case of forgotten liquid waste insert, follow the cleaning procedure below.

In case of forgotten liquid waste insert, the liquid waste is collected in the liquid waste reservoir of the processing station adapter. This prevents contamination of the instrument.

Decontaminating processing station adapters

To decontaminate a processing station adapter (e.g., after a spillage), also clean it as described below:

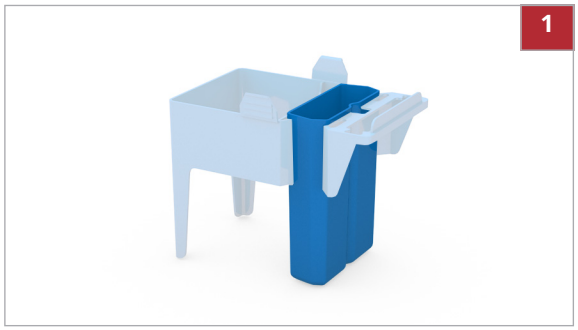
To clean a processing station adapter (in case of forgotten liquid waste insert) ▸ (22)

Daily

Approx. 35 min

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®
- ☐ Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)

To clean a processing station adapter (in case of forgotten liquid waste insert)



1 WARNING! Risk of toxic gas.
As long as the liquid waste reservoir contains liquid waste, do not fill it with bleach.

Fill the liquid waste reservoir with 70% ethanol. Wait for 15 min.

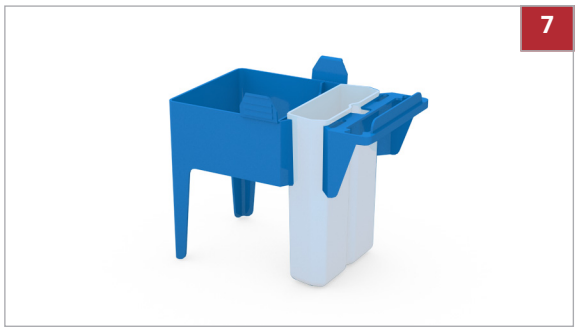
2 Empty the liquid waste reservoir.

3 Fill the liquid waste reservoir with a freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10). Wait for 15 min.

4 Empty the liquid waste reservoir.

5 Rinse the liquid waste reservoir with deionized or distilled water.

6 Leave the processing station adapter to dry.



7 Clean the rest of the processing station adapter with a lint-free cloth moistened with deionized or distilled water.

8 Clean the rest of the processing station adapter with a lint-free cloth moistened with 70% ethanol or mikrozid®.

Cleaning liquid waste inserts

Clean liquid waste inserts regularly.

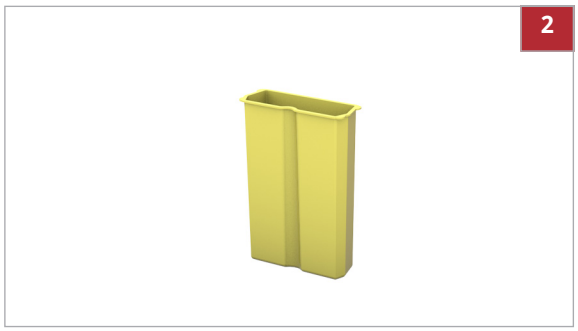
To avoid build-up of MGP reagent in the liquid waste insert, rinse the liquid waste insert after each run with 70% ethanol p.a.

Daily

Approx. 30 min

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a.
- ☐ Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)

To clean a liquid waste insert



1 Fill a container or bath with cover with 70% ethanol.

2 Soak the liquid waste insert for 15 min in the ethanol. During soaking, move the liquid waste insert gently five times back and forth to increase cleaning efficiency.

ℹ Make sure that the ethanol covers the liquid waste insert completely.

3 Remove the liquid waste insert from the ethanol. Empty the liquid waste insert.

4 Fill a container or bath with cover with a freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10).

5 Soak the liquid waste insert for 15 min in the bleach solution. During soaking, move the liquid waste insert gently five times back and forth to increase cleaning efficiency.

ℹ Make sure that the bleach solution covers the liquid waste insert completely.

6 Remove the liquid waste insert from the bleach solution. Empty the liquid waste insert.

7 Rinse the liquid waste insert with deionized or distilled water.

8 Leave the liquid waste insert to dry.
ℹ Make sure that the outer surface of the liquid waste insert is completely dry before loading it into the liquid waste reservoir.

Cleaning the tip waste container

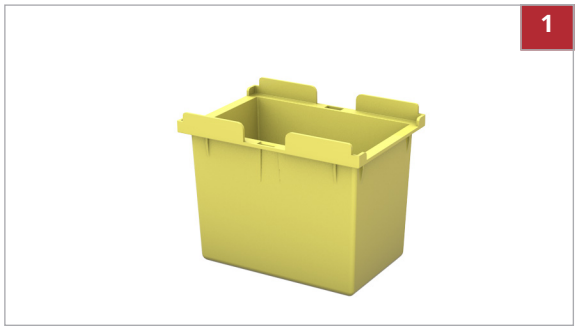
Clean the inside and the outside of the tip waste container regularly.

Daily

Approx. 3 min

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®
- ☐ Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)

▸ To clean the tip waste container



1 Wipe the tip waste container with a lint-free cloth moistened with 70% ethanol or mikrozid®.

2 Wipe the tip waste container with a lint-free cloth moistened with a freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10).

3 Wipe the tip waste container with a lint-free cloth moistened with deionized or distilled water.

4 Leave the tip waste container to dry.

Cleaning the reagent tip park

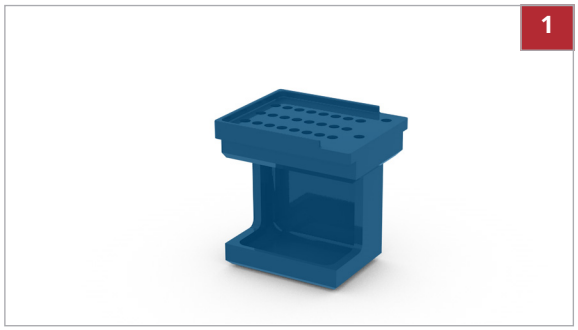
Clean the reagent tip park regularly.

Daily

Approx. 3 min

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®

▸ To clean the reagent tip park



1 Wipe the reagent tip park with a lint-free cloth moistened with deionized or distilled water.

2 Wipe the reagent tip park with a lint-free cloth moistened with 70% ethanol or mikrozid®.

ⓘ Make sure there are no residues left inside the holes.

Cleaning output adapters, post elution adapter, and downholder frame

Clean the output adapters, the post elution adapter, and the downholder frame regularly.

Decontaminating output adapters, post elution adapter, and downholder frame

To decontaminate the output adapters, the post elution adapter, or the downholder frame (e.g., after a spillage), also clean them as described below:

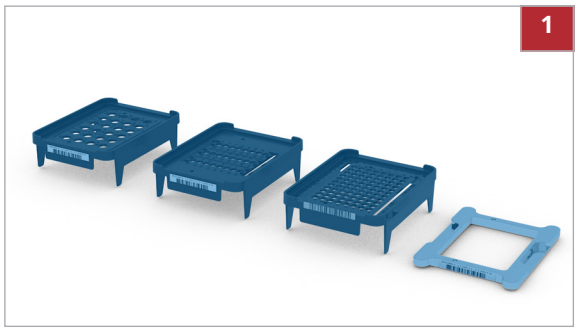
To clean the output adapters, the post elution adapter, and the downholder frame ▸ (26)

Weekly

Approx. 2 min each

- ☐ Powder-free lab gloves
- ☐ Eye protection
- ☐ Personal protective equipment
- ☐ Lint-free cloths
- ☐ Deionized or distilled water
- ☐ 70% ethanol p.a. or mikrozid®
- ☐ Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10), or decontamination solution

To clean the output adapters, the post elution adapter, and the downholder frame



1. Wipe the output adapters, the post elution adapter, and the downholder frame with a lint-free cloth moistened with deionized or distilled water.
2. Repeat the cleaning procedure using a lint-free cloth moistened with 70% ethanol or mikrozid®.
3. Repeat the cleaning procedure using a lint-free cloth moistened with decontamination solution.
4. Repeat the cleaning procedure using a lint-free cloth moistened with deionized water.

Overview of cleaning

You must clean the instrument regularly, at least weekly.

Refer to the following table for an overview of cleaning frequencies and cleaning solutions.

Instrument part / accessory	Frequency	Cleaning solutions	Procedure
Outside of the instrument	Weekly	• 70% ethanol p.a.	Cleaning the outside of the instrument (15)
Inside of the instrument: • Rack slots • Instrument deck • Inside of the instrument cover	Weekly	• Deionized or distilled water • 70% ethanol p.a. • Decontamination solution	Cleaning the inside of the instrument (16)
• Reagent rack • Sample racks • Sample tube adapters	Weekly	• Deionized or distilled water • 70% ethanol p.a. or mikrozid®	Cleaning the reagent rack, sample racks, and sample tube adapters (19)
Processing station adapters	Weekly	• Deionized or distilled water • 70% ethanol p.a. or mikrozid®	Cleaning processing station adapters (20)
Processing station adapters (in case of forgotten liquid waste inserts)	Daily	• Deionized or distilled water • 70% ethanol p.a. or mikrozid® • Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)	Cleaning processing station adapters (in case of forgotten liquid waste inserts) (21)
Liquid waste inserts	Daily	• Deionized or distilled water • 70% ethanol p.a. or mikrozid® • Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)	Cleaning liquid waste inserts (23)

Overview of cleaning

Instrument part / accessory	Frequency	Cleaning solutions	Procedure
Tip waste container	Daily	• Deionized or distilled water • 70% ethanol p.a. or mikrozid® • Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10)	Cleaning the tip waste container (24)
Reagent tip park	Daily	• Deionized or distilled water • 70% ethanol p.a. or mikrozid®	Cleaning the reagent tip park (25)
• Output adapters • Post elution adapter • Downholder frame	Weekly	• Deionized or distilled water • 70% ethanol p.a. or mikrozid® • Freshly prepared solution of 0.5% sodium hypochlorite in distilled or deionized water (dilute household bleach 1:10), or decontamination solution	Cleaning output adapters, post elution adapter, and downholder frame (25)

Overview of cleaning

UV decontamination

If manually configured, you have to perform UV decontamination regularly.

By default, you have to perform UV decontamination on demand only.

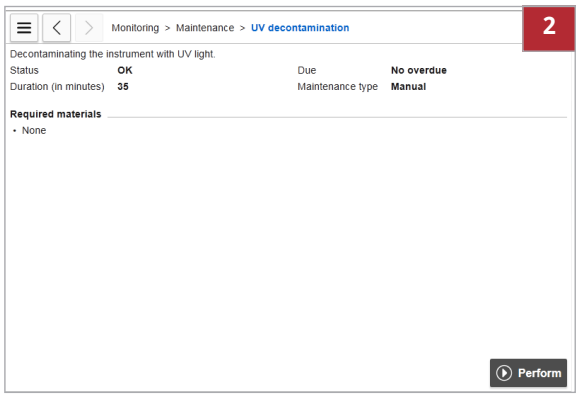
When indicated by the software (By default: on demand only).

35 min

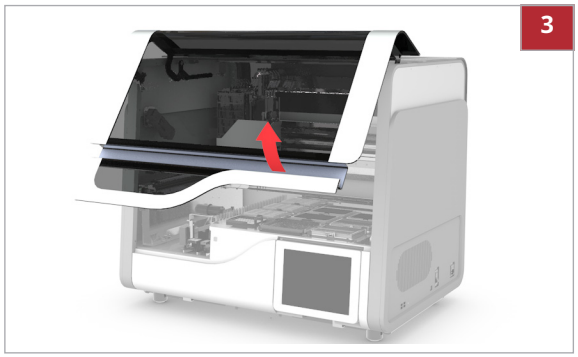
- ☐ **UV decontamination** task displayed
- ☐ All supplies are unloaded

To decontaminate the instrument using UV decontamination

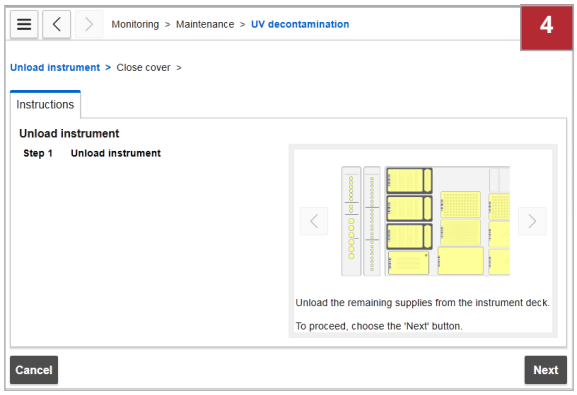
1 Choose the **UV decontamination** task button.
➔ The maintenance wizard is displayed.



2 Choose the **Perform** button.



3 Open the cover. Unload all supplies from the instrument deck.



4 Choose the **Next** button.

5 Close the cover.

➔ UV decontamination is performed automatically.

➔ When UV decontamination is complete, the **Maintenance** panel is displayed. Successfully completed maintenance actions have status **OK**. The next due date is listed.

Checking pipetter tightness

To ensure accurate pipetting, perform a tightness check of the pipetters regularly.

When indicated by the software, but at least every 30 days.

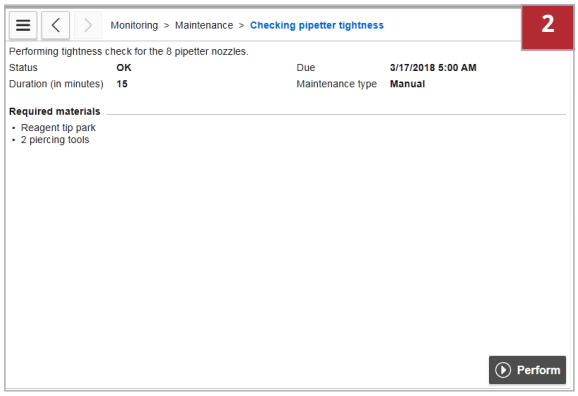
15 min

- ☐ Reagent tip park
- ☐ 2 piercing tools

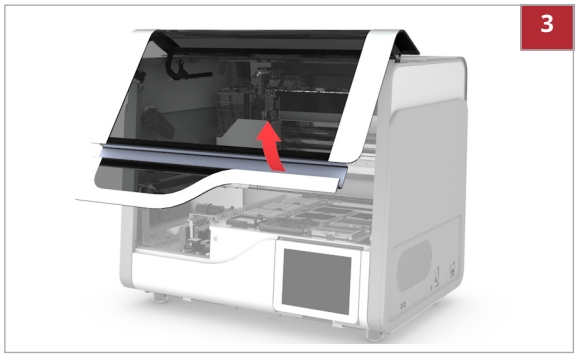
- ☐ **Checking pipetter tightness** task displayed
- ☐ All supplies are unloaded

To check the pipetter tightness

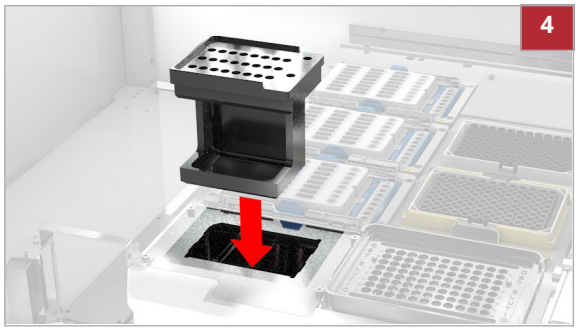
1 Choose the **Checking pipetter tightness** task button.
➔ The maintenance wizard is displayed.



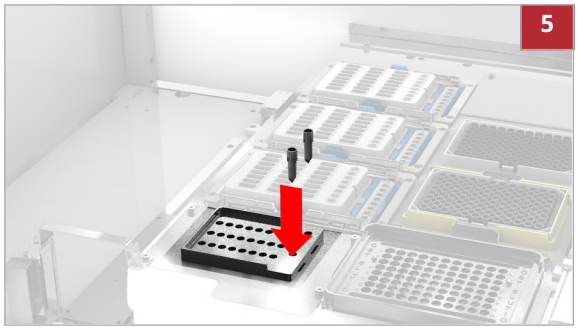
2 Choose the **Perform** button.



3 Open the cover.

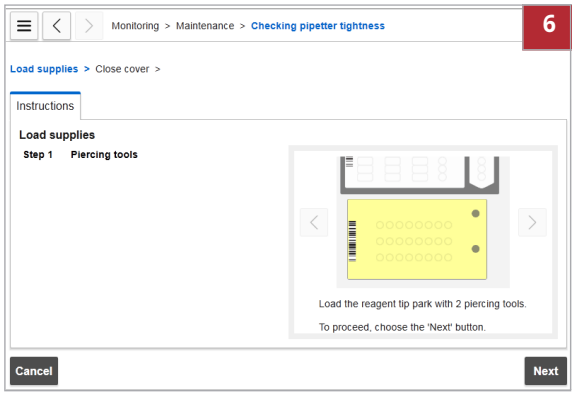


4 In the reagent tip park station, load the empty reagent tip park with the barcode label facing to the left.

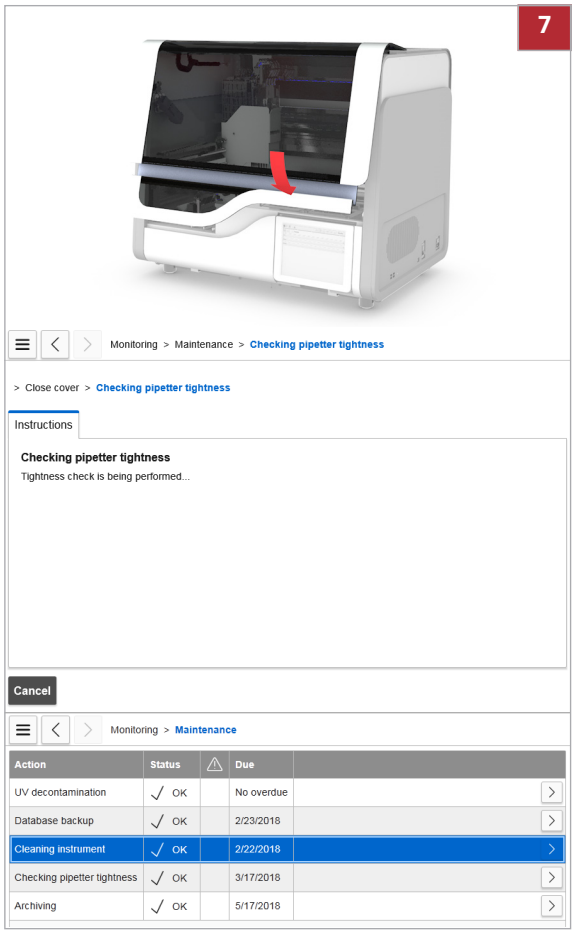


5 CAUTION! Risk of injury.
Avoid touching the tip of a piercing tool.

Insert 2 piercing tools into the dedicated holes in the reagent tip park.



6 Choose the **Next** button.



7 Close the cover.

➔ The tightness check is performed automatically.

➔ When the tightness check is complete, the **Maintenance** panel is displayed. Successfully completed maintenance actions have status **OK**. The next due date is listed.

Backing up the database

To prevent loss of data, back up your database regularly.

⚠ CAUTION

Data manipulation in backup files

Unprotected backup files may be manipulated. Importing manipulated files during database restore may lead to loss of data integrity or system unavailability.

- Transmit and store backup files via secure channels (e.g., by using sFTP).

Use an instrument-specific, preconfigured external storage device to back up the system.

On an external storage device, the system can access the highest level only, i.e., the root folder *drive:*\. You cannot access folders on an external storage device.

After database backup, restart the system.

About automatic database backup

If configured for automatic database backups, the system shows the following behavior, when the **Database backup** maintenance action becomes due (i.e., at the beginning of the configured time window):

- The instrument is on and the configured storage location is available (i.e., the external storage device is connected or internal backup is configured):
  Database backup is done automatically. Routine operation is possible, no user interaction is required.
- The instrument is on, but a configured external storage location is not available:
  Database backup is done automatically. The backup file is stored locally. A corresponding message is displayed informing the user that the backup file was not moved to the external storage device. The user has to move the file manually (via **Monitoring > Data explorer**).
- The instrument is off:
  No database backup is done. At the next system start, a corresponding task is displayed. The user has to back up the database.

To enable the automatic database backup, observe the following:

- Set the time window for the database backup to a time, when the instrument is on.
- Make sure the external storage device is connected to the system during the time window for the database backup.

About manual database backup

If configured for manual database backups, the system shows the following behavior when the **Database backup** maintenance action becomes due (i.e., at the beginning of the configured time window):

- A corresponding **Database backup** task is displayed.
- You must perform database backup.

Backing up the database (34)

About restoring the database

If you need to restore the database, contact your Roche Service representative.

NOTICE

Incorrect status of reagents and consumables

When the database is restored, the system may identify used reagents and consumables as new.

- When the database is restored, discard used reagents and consumables according to local regulations.

- Depends on the requirements of your local IT support
- Recommended: daily (but at least every 7 days)

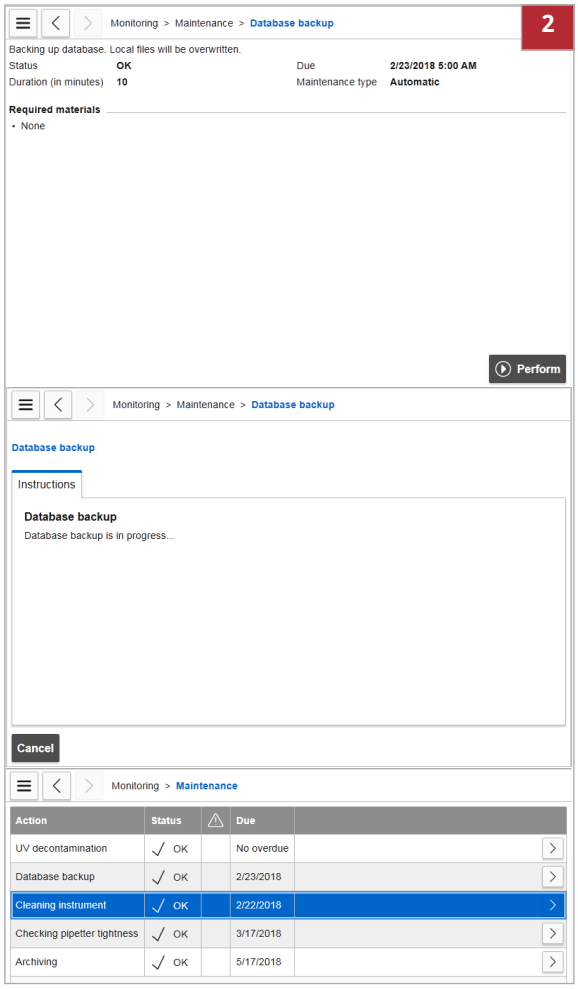
Depends on the size of the database.

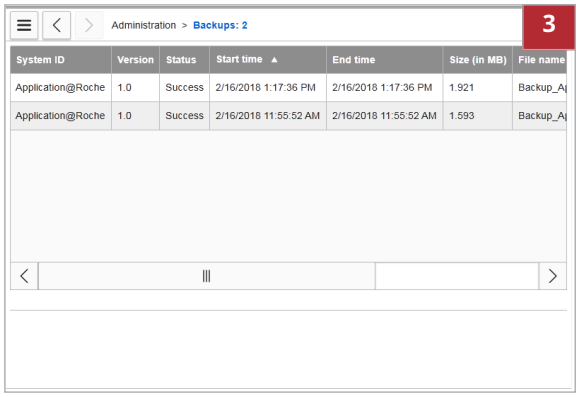
- ☐ If the backup is configured to use an external storage device, connect the external storage device to the USB port of the instrument.

- ☐ **Database backup** task displayed (no automatic database backup)

For configuring backup settings, see the User Assistance.

To back up the database





1 Choose the **Database backup** task button.
   ➔ The maintenance wizard is displayed.

2 Choose the **Perform** button.
   ➔ Database backup is performed.
   ➔ When the database backup is complete, the **Maintenance** panel is displayed. Successfully completed maintenance actions have status **OK**. The next due date is listed.

3 When the backup is complete, choose **Administration > Backup**.

4 Check the status of the latest database backup.
   ⓘ Successful backups have the status **Success**. The **Backup** panel displays all backups. To display the backups stored locally on the system, choose **Monitoring > Data explorer**.

5 Restart the system as described in (306).

Related topics

- For configuring backup settings and for checking backup logs, see the User Assistance.

Archiving data

To view results, audit trails, and messages offline on a separate PC, archive your data.

NOTICE

Data security

Risk of misuse and/or manipulation of archive files.

- Transmit and store archive files via secure channels (e.g., using sFTP or a dedicated external storage device).
- Ensure that files at the archive location (e.g., PC) are secured.

The following data is archived:

- Run results and sample results
- Audit trails
- Messages

Archiving deletes the archived audit trails and messages from the system. Archived results stay on the system, but are marked as archived. You cannot add comments to archived results.

Use an instrument-specific, preconfigured external storage device for archiving.

On an external storage device, the system can access the highest level only, i.e., the root folder *drive:*\. You cannot access folders on an external storage device.

After archiving, restart the system.

About archive files

Archiving generates 3 separate files:

- Index file for quick search (*.index* file extension)
- Archive file with metadata (*.archive* file extension)
- Packed file with the actual data (*.part0* file extension)

To transfer the archive to a different location (e.g., from the external storage device to the PC running the archive viewer), make sure to transfer all files of the archive.

About the archive viewer

To view archived data, install the standalone archive viewer on a separate PC.

For the executable file of the archive viewer contact your Roche Service representative.

For the archive viewer, see the User Assistance.

About automatic archiving

If configured for automatic archiving, the system shows the following behavior, when the **Archiving** maintenance action becomes due (i.e., at the beginning of the configured time window):

- The instrument is on and the configured storage location is available (i.e., the external storage device is connected or internal archiving is configured):
  Archiving is done automatically. Routine operation is possible, no user interaction is required.
- The instrument is on, but a configured external storage location is not available:
  Archiving is done automatically. The archive files are stored locally. A corresponding message is displayed informing the user that the archive files were not moved to the external storage device. The user has to move the files manually (via **Monitoring > Data explorer**).
- The instrument is off:
  No archiving is done. At the next system start, a corresponding task is displayed. The user has to archive.

To enable the automatic archiving, observe the following:

- Set the time window for the archiving to a time, when the instrument is on.
- Make sure the external storage device is connected to the system during the time window for the archiving.

About manual archiving

If configured for manual archiving, the system shows the following behavior, when the **Archiving** maintenance action becomes due (i.e., at the beginning of the configured time window):

- A corresponding **Archiving** task is displayed.
- You must perform archiving.

- Depends on the requirements of your local IT support
- Default: earliest every 90 days

Depends on the amount of archived data.

- ☐ If the archive is configured to use an external storage device, connect the external storage device to the USB port of the instrument.

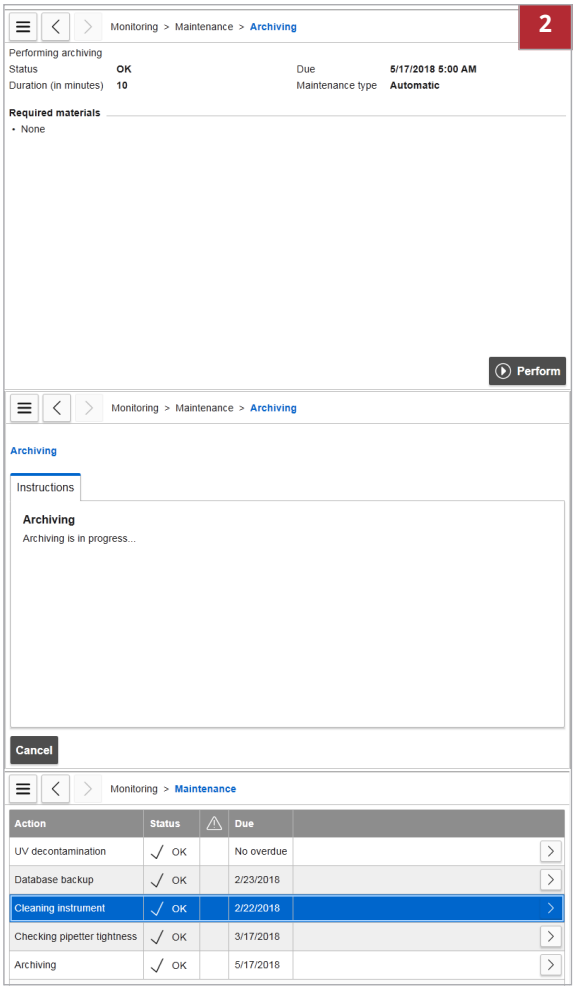
- ☐ **Archiving** task displayed (no automatic archiving)

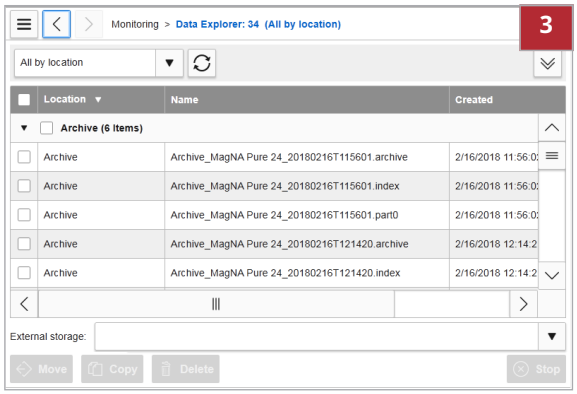
For configuring archiving settings, see the User Assistance.

To archive data

1 Choose the **Archiving** task button.
➔ The maintenance wizard is displayed.

2 Choose the **Perform** button.
➔ Archiving is performed.
➔ When the archiving is complete, the **Maintenance** panel is displayed. Successfully completed maintenance actions have status **OK**. The next due date is listed.





3 To display the archives stored locally on the system, choose **Monitoring > Data explorer**.

ⓘ Archives consist of 3 separate files. Ensure that you perform any actions on all 3 files.

4 Restart the system as described in (306).

Related topics

- For configuring archiving settings and for the archive viewer, see the User Assistance.