

1 Purpose

This document describes the differences between the new software version **MagIC Net 4.2** and its predecessor **MagIC Net 4.1**.

2 New features

Columns

Removed separation columns

The following separation columns are no longer available, starting from MagIC Net 4.2:

- Metrosep Anion Dual 2 - 75/4.6 (suppressed)
- Metrosep Anion Dual 2 - 75/4.6 (non-suppressed)
- Metrosep Anion Dual 3 - 100/4.0
- Metrosep C 5 - 150/4.6
- Phenomenex Star Ion A300 - 100/4.6

New device firmware

- Firmware version **5.947.0210** for 947 Professional UV/VIS Detector Vario
The firmware version enables the firmware update via MagIC Net.
The firmware update is mandatory.

General

Audit Trail

- The Audit Trail is now also available for MagIC Net Basic.

E-mail templates

- An encrypted connection to the SMTP mail server can now be set up. A selection can be made between the **SSL** or **StartTLS** encryption types.

Database program part

Opening a database

- Databases can be opened from the **Database manager** dialog with **[Open]**.

Method program part

Removed method templates

- The following method templates are no longer available, starting with MagIC Net 4.2:
 - Metrosep Anion Dual 2 - 75/4.6 (suppressed)
 - Metrosep Anion Dual 2 - 75/4.6 (non-suppressed)
 - Metrosep Anion Dual 3 - 100/4.0
 - Metrosep C 5 - 150/4.6

Opening a method

- Methods can be opened from the **Method manager** dialog with **[Open]**.

Defining measurement duration using formula

- In the time program of the conductivity detector, the amperometric detector and the UV/VIS detector, the **Measuring time** can be defined using a formula in the **Measure noise** command.
- In the time program of the conductivity detector, the amperometric detector and the UV/VIS detector, the **Measuring time** can be defined using a formula in the **Measure drift** command.

3 Improvements

General

Performance optimization

- Performance improvements are available from MagIC Net 4.2. A client/server system also functions stably if the server is not located in the internal network, but rather in a remote data processing centre, for example, or if the network latency is increased.
Existing databases and methods must be migrated into another data format to improve performance. The migration can be started via the database management or the method manager.

New look and feel

- MagIC Net 4.2 has a new look and feel. The new look and feel improves the scaling and sharpness of the user interface on 4K monitors.
It is now possible to choose between a light and a dark display. Operation has not changed.

Database program part

Database backup monitoring

- An additional status has been introduced for monitoring the database backup. If it is unknown whether a due database backup has been successfully performed, then the database will be highlighted in orange in the database management. This status is used, for example, when a backup is running.
The **[Updating]** button has been newly added. The status of the database backup can be updated with **[Updating]**. The database marking is adjusted accordingly.

Method program part

US pharmacopoeia

- The formula for calculating the resolution has been updated.
- The formula for calculating the theoretical plates has been updated.
- When selecting the pharmacopoeia, **USP, latest ed.** is now also available for selection in addition to **USP**.
 - **USP**: US pharmacopoeia up to USP <621>NF_01_Aug_2017
 - **USP, latest ed.**: US pharmacopoeia from USP <621>NF_01_Dec_2022

4 Fixed bugs

General

Maximizing the window

- If work was done with multiple screens and MagIC Net was not open on the primary screen, then MagIC Net was moved to the primary screen when the window was maximized.

Print data

- If a user did not have the necessary permissions for directories, the printing of files (e.g. determination overviews, security settings) caused MagIC Net to crash.
The document *MagIC Net 4.2 Installation (8.0102.8016)* contains information on the desired permissions.

Workplace program part

Dosino gradient before injection with 889 IC Sample Center

- When executing a method with the following commands in the following order, an exception wizard appeared:
 1. Dosino gradient
 2. Injection with a 889 IC Sample Center

Loss of tasks

- If tasks were defined in the **Timer** dialog and then the colour of the workspace was changed in the **Workplace properties** dialog, then the defined tasks were no longer available.

Database program part

UTC in reports

- In reports, the time at which the report was generated is specified with Coordinated Universal Time (UTC), e.g. 14:30:10 **UTC +1**.

Variables

- The result of the **CALRSE** variable was not correct.
- The result of the **FIN** sub-program variable was incorrectly invalid in rare cases.

Column names during recalculation

- If the upper/lower case of a column was not consistent in the configuration and in a method, then the **Theoretical plates per meter** had an invalid result after recalculation.
The upper/lower case of column names is now disregarded.

Conductivity detector serial number

- In determinations with a conductivity detector with a serial number that began with 0, the serial number was displayed under **Database ► Information ► Devices** without 0.
Example: Serial number according to configuration: 01101
Serial number according to **Database ► Information ► Devices**: 1101

Method program part

Method import

- If a method was imported with a time program command **Dosino gradient** in MagIC Net and if the solution for the Dosino gradient was named differently than on the system on which the method was created, than an error would result.

Duplicated tabs

- If a device was added in a method via **Add ► Device ► New device**, and a device of the same type and with the same device name already existed in the configuration, then some tabs would duplicated in the method.
The following devices and tabs were affected by this error:
 - Sample changer with 2 towers, e.g. 815 Robotic USB Sample Processor XL: **Peripherals tower**
 - 889 IC Sample Center: **Cooling, Injector**
 - Multi EA Combustion Module: **LPG/GSS**
 - Devices with analog outputs, e.g. 891 Professional Analog Out: **Out 1 to Out 4**

Variables

- The result of the **CALRSE** variable was not correct.
- The result of the **FIN** sub-program variable was incorrectly invalid in rare cases.

Measuring conductivity

- If a method contained 2 commands **Measure conductivity** and the difference was calculated, the following behavior occurred: If the warning limit was set to 9,999 µS/cm or less, then the difference was calculated correctly. If the warning limit was set to a value above 9,999 µS/cm, then the difference was calculated incorrectly.

Corrupted passwords

- If authentication is enabled in the e-mail template, an encrypted password must be entered to send e-mails. In rare cases, the password has been corrupted. Not all digits were shown when a corrupted password was displayed.

Missing error messages

- No error message appeared if the UV lamp of 947 Professional UV/VIS Detector Vario failed to ignite.
- If a method with a combustion module contained the **Combust** time program command with the **Flame sensor** option and the flame sensor was not connected, then the time program would crash with the affected command. No error message appeared.

Configuration program part

Port for e-mail notification

- In the **Send e-mail** window, changes in the **Port** field were not saved when closing the window despite confirmation with **[OK]**. The value in the **Port** field was reset to the default value. The window is reached via **Tools ► Security settings ► Login/Password protection ► E-mail....**

Manual program part

Missing error message

- No error message appeared if the UV lamp of 947 Professional UV/VIS Detector Vario failed to ignite.

5 Known bugs

Method program part

Statistics

- An error is displayed if the **CONCMEAN** variable is used as statistics function.
Correct procedure: Use the **CONC** variable only as a statistics function. To calculate the mean value, select Mean value in the **Define statistics** dialog.
- If the **CONCMEANSD** variable is used as statistics function, the results are output as invalid during reprocessing.
Correct procedure: Use the **CONC** variable only as a statistics function. To calculate the standard deviation, select Standard deviation in the **Define statistics** dialog.

Tandem dosing

- Tandem dosing requires 2 dosing units. Dosing unit A doses until it is empty. Then dosing unit A is filled. In the meantime dosing unit B doses. In the next row, dosing unit A starts again with dosing. Each dosing unit doses until it is completely empty and is then filled again. So it can happen that both dosing units are empty at the same time. If dosing cannot be carried out correctly, the mixing ratio of the gradient changes. To avoid this, program the method in such a way that dosing unit B is filled in the beginning or in the end of each determination.

Monitoring

- Common variables cannot be used for monitoring. If common variables are used for monitoring as **Upper limit** and **Lower limit** in a method, then the limits in a running determination are invalid.

Database program part

Temperature specification

- For 930 instruments without oven, the **Analyses** tab in the **Information** subwindow shows a temperature of $-22.8\text{ }^{\circ}\text{C}$.
- If no column is defined for the analysis in a method, but a temperature is defined for the device, then the **Analyses** tab in the **Information** subwindow shows no temperature. Therefore always assign a column to the analysis.

Monitoring

- A lower limit and an upper limit are defined for monitored determinations. If the result is outside of the defined limits, then a message is displayed on the **Messages** tab in the **Information** subwindow. If the determination is then recalculated with changed limits and the result is within the limits, then the message will nonetheless be displayed.

6 Compliance

The current software version does not contain any modifications that affect conformity of **MagIC Net** regarding 21 CFR Part 11 or its classification into the GAMP software category.