

IC equipment



PCR with dosing unit (6.5330.400)

Manual

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Technical Communication
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1 Introduction

1.1 Description of the IC equipment: PCR with dosing unit

The IC equipment: PCR with dosing unit allows for photometric determination of UV/VIS-active components after post-column derivatization.

With the IC equipment: PCR with dosing unit, you can precisely dose and convey solutions for post-column derivatization. An 800 Dosino doses a solution for post-column derivatization into the sample stream with a pre-defined flow rate. By adding the solution, UV/VIS-inactive substances are converted into components that are detected more easily.

What sets the used dosing unit PCR 5 mL (6.3033.150) apart is that it is more pressure-stable than the conventional 807 Dosing Unit 5 mL (6.3032.150).

The IC equipment: PCR with dosing unit can be built into any existing Metrohm IC system and can be used without restrictions. It can, of course, also be included in the system setup from the beginning.

Description

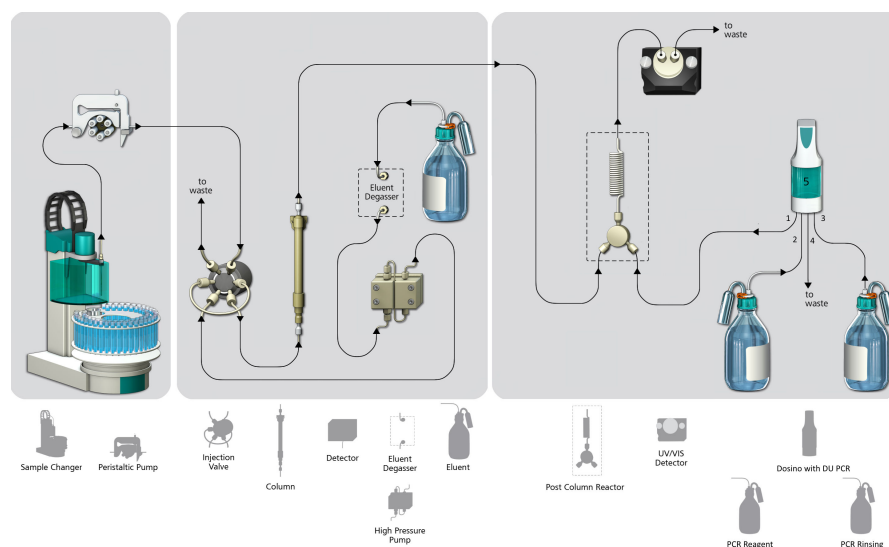


Figure 1 Overview PCR



1.2 About the documentation

This manual describes the installation of the IC equipment: PCR with dosing unit.



CAUTION

Read through this documentation carefully before putting the equipment into operation. The documentation contains information and warnings which the users must follow in order to ensure safe operation of the equipment.

1.2.1 Symbols and conventions

The following symbols and formatting may appear in this documentation:

(5-12)	Cross-reference to figure legend The first number refers to the figure number, the second to the instrument part in the figure.
1	Instruction step Perform the steps one after the other.
Method	Dialog text, parameter in the software
File ► New	Menu or menu item
[Continue]	Button or key
	WARNING This symbol draws attention to a possible life-threatening hazard or risk of injury.
	WARNING This symbol draws attention to a possible hazard due to electrical current.
	WARNING This symbol draws attention to a possible hazard due to heat or hot instrument parts.
	WARNING This symbol draws attention to a possible biological hazard.





WARNING

Warning of optical radiation



CAUTION

This symbol draws attention to possible damage to instruments or instrument parts.



NOTICE

This symbol highlights additional information and tips.



2 Overview

2.1 Parts of the IC equipment: PCR with dosing unit

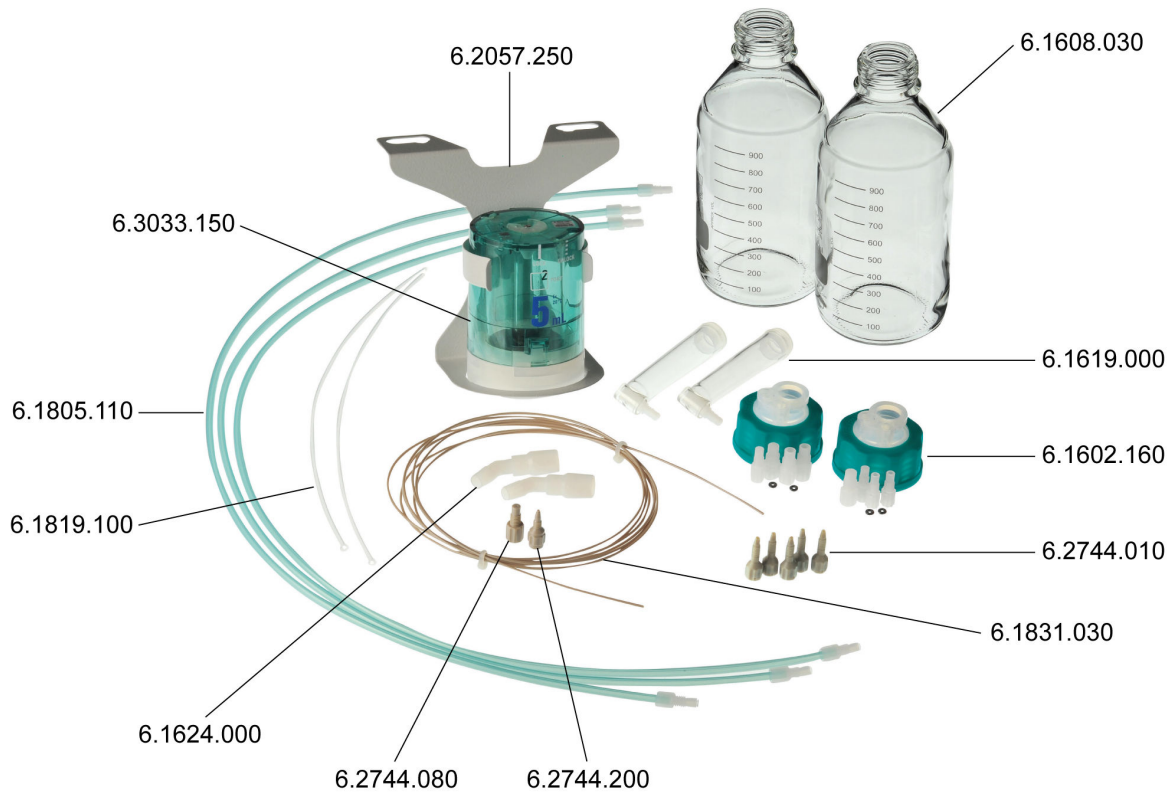


Figure 2 IC equipment: PCR with dosing unit – Parts

To use the dosing unit PCR, you need the following in addition to the IC equipment: PCR with dosing unit:

- 800 Dosino (2.800.00X0)

2.2 Overview of the dosing unit PCR

The dosing unit PCR has 4 connectors.

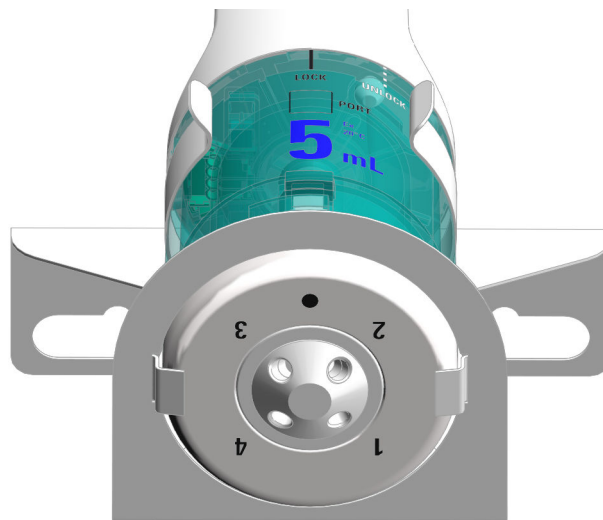


Figure 3 Connectors of the dosing unit PCR

1 Port 1

Connector for the PEEK capillary for conveying the reagent

2 Port 2

Connector for the FEP tubing for conveying the reagent

3 Port 3

Connector for the rinsing equipment

4 Port 4

Connector for the connection to waste

**CAUTION**

Read through the correct procedure in the manual for the 800 Dosino before you attach the Dosino to the dosing unit.

1 Attaching the Dosino to the dosing unit

Attach the Dosino to the dosing unit (*see manual for the 800 Dosino*).

2 Fitting the Dosino holder onto the ion chromatograph

- Loosen the bottle holder on the ion chromatograph using the hex key.
- Clamp the Dosino holder under it sideways.
- Fasten the bottle holder again.

3 Attaching the Dosino to the holder

Insert the Dosino into the Dosino holder from above.

4 Connecting the Dosino to the ion chromatograph**NOTE**

The ion chromatograph **must** be **switched off** when the Dosino is being plugged into the MSB connector.

- Check whether the ion chromatograph is switched off. If this is not the case, switch off the ion chromatograph.
- Plug the Dosino cable into the MSB 1 connector of the ion chromatograph.

3.1.2 Equipping the glass bottle for the reagent*Required accessories*

- Glass bottle (6.1608.030) filled with the reagent for post-column derivatization
- Bottle cap for eluents and reagents (6.1602.160)
- M8 stopper (6.1446.080), included in the accessories for the bottle cap for eluents and reagents (6.1602.160)
- FEP aspiration tubing (6.1819.100)
- Adsorber tube (6.1619.000)
- Adapter for adsorber tube (6.1624.000)

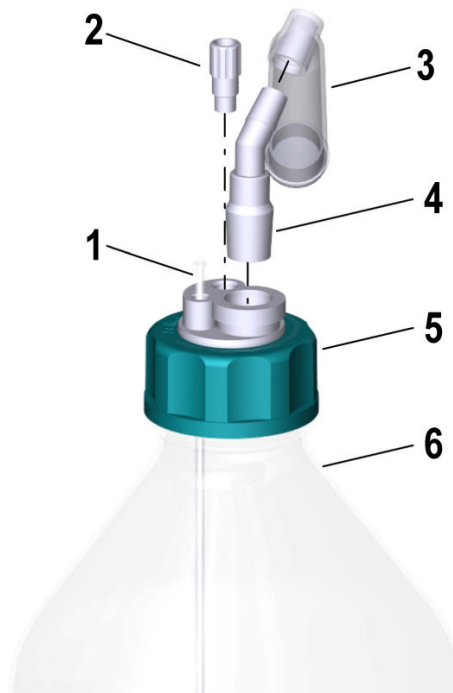


Figure 5 Equipping the glass bottle for the reagent

1	FEP aspiration tubing	2	M8 stopper
3	Adsorber tube	4	Adapter for adsorber tube
5	Bottle cap for reagents	6	Glass bottle filled with reagent

1 Mounting the aspiration tubing

- Insert the aspiration tubing from above into the M6 opening of the bottle cap.
- Use the capillary cutter to cut the aspiration tubing to such a length that it touches the bottom of the glass bottle.

2 Inserting the stopper

Tighten the M8 stopper to the M8 opening of the bottle cap.

3 Mounting the adsorber tube

- Fill the adsorber tube with some cotton and, if necessary, with adsorber material.
- Place the adsorber tube onto the adapter.
- Insert the adapter into the standard ground-joint opening (SGJ opening) of the bottle cap.

**NOTE**

Depending on the reagent used, the adsorber tube must be filled differently.

- For alkaline reagents or reagents with a low buffer capacity:
First a little cotton, then with CO₂ adsorber material.
- For all other reagents: Only with cotton.

4 Mounting the bottle cap

Screw the bottle cap onto the glass bottle.

3.1.3 Mounting the FEP tubing

Required accessories FEP tubing (6.1805.110)



Figure 6 Mounting the FEP tubing

- 1** Tighten one end of the FEP tubing to the M6 opening of the bottle cap.
- 2** Tighten the other end of the FEP tubing in **Port 2** of the dosing unit.



3.1.4 Mounting the PEEK capillary

Required accessories

- PEEK capillary 0.75 mm (6.1831.030)
- Pressure screws (6.2744.010)
- Coupling M6 / UNF (6.2744.080)

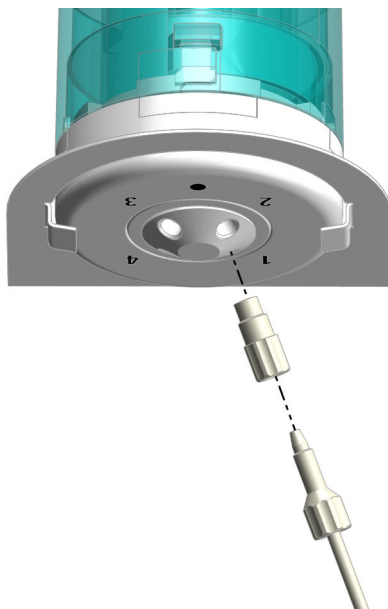


Figure 7 Mounting the PEEK capillary

- 1** Tighten the coupling to **Port 1** of the dosing unit.
- 2** Tighten one end of the PEEK capillary to the coupling using a pressure screw.
- 3** Tighten the other end of the PEEK capillary to the reactor using a pressure screw.



NOTE

Refer to the manual for the reactor (*29430110 Professional Thermostat/Reactor Vario manual, 8.943.8001EN*) for information on which opening the PEEK capillary is fastened to.

3.2 Installing the rinsing equipment

The rinsing equipment enables rinsing the dosing unit PCR.

3.2.1 Equipping the glass bottle for the rinsing solution

Required accessories

- Glass bottle (6.1608.030) filled with suitable rinsing solution
- Bottle cap for eluents and reagents (6.1602.160)
- M8 stopper (6.1446.080), included in the accessories for the bottle cap for eluents and reagents (6.1602.160)
- FEP aspiration tubing (6.1819.100)
- Adsorber tube (6.1619.000)
- Adapter for adsorber tube (6.1624.000)

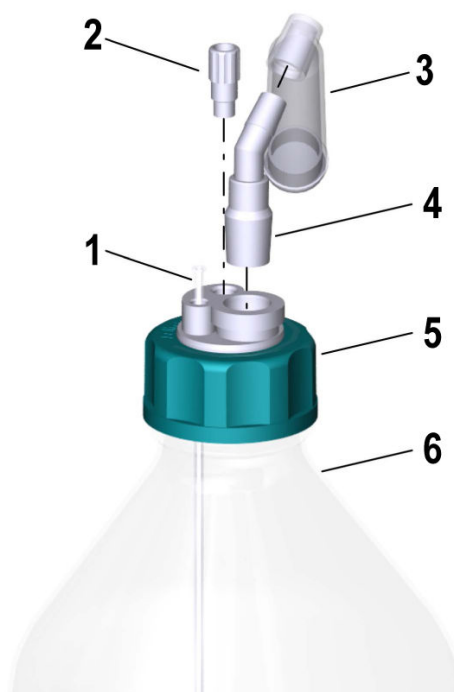


Figure 8 Equipping the glass bottle for the rinsing solution

1	FEP aspiration tubing	2	M8 stopper
3	Adsorber tube	4	Adapter for adsorber tube
5	Bottle cap for reagents	6	Glass bottle filled with rinsing solution

1 Mounting the aspiration tubing

- Insert the aspiration tubing from above into the M6 opening of the bottle cap.



- Use the capillary cutter to cut the aspiration tubing to such a length that it touches the bottom of the glass bottle.

2 Inserting the stopper

Tighten the M8 stopper to the M8 opening of the bottle cap.

3 Mounting the adsorber tube

- Fill the adsorber tube with some cotton and, if necessary, with adsorber material.
- Place the adsorber tube onto the adapter.
- Insert the adapter into the SGJ opening of the bottle cap.



NOTE

Depending on the reagent used, the adsorber tube must be filled differently.

- For alkaline reagents or reagents with a low buffer capacity: First a little cotton, then with CO₂ adsorber material.
- For all other reagents: Only with cotton.

4 Mounting the bottle cap

- Screw the bottle cap onto the glass bottle.

3.2.2 Mounting the FEP tubing

Required accessories FEP tubing (6.1805.110)





Figure 9 Mounting the FEP tubing

- 1 Tighten one end of the FEP tubing to the M6 opening of the bottle cap.
- 2 Tighten the other end of the FEP tubing in **Port 3** of the dosing unit.

3.3 Installing a connection to waste

Required accessories

- FEP tubing (6.1805.110)
- Adapter UNF / M6 (6.2744.200)



Figure 10 *Installing a connection to waste*

- 1** Tighten one end of the FEP tubing to **Port 4** of the dosing unit.
- 2** Connect the other end of the FEP tubing to the waste collector with the adapter.


4 Operation and maintenance

Maintenance work on the dosing unit must be performed regularly. Information on the care and maintenance of the dosing unit can be found in the product information for the dosing unit PCR (8.0108.8008EN).

5 Displaying accessories

Up-to-date information on the scope of delivery and on optional accessories can be found on the Metrohm website.

1 Searching for a product on the website

- Go to <https://www.metrohm.com>.
- Click on .
- Enter the article number of the product (e.g. **2.1001.0010**) into the search field and press **[Enter]**.

The search result is displayed.

2 Displaying product information

- To display the products matching the search term, click on **Product models**.
- Click on the desired product.

Detailed information regarding the product is displayed.

3 Displaying accessories and downloading the accessories list

- To display the accessories, scroll down to **Accessories and more**.
 - The **scope of delivery** is displayed.
 - Click on **[Optional parts]** for the optional accessories.
- To download the accessories list, click on **[Download accessories PDF]** under **Accessories and more**.



NOTE

Metrohm recommends keeping the accessories list for reference purposes.



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