

# Bottle cap multi-use



6.01601.000

Product information

8.0108.8002EN / 2021-07-23





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Technical Communication  
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# 1 Overview

## 1.1 Bottle cap multi-use – Brief description

The bottle cap multi-use is a bottle cap for laboratory bottles with a GL 45 thread. It contains a writeable RFID tag.

## 1.2 Bottle cap multi-use – Product versions

The product is available in the following versions:

*Table 1 Product versions*

Article number	Designation
6.01601.000	Bottle cap multi-use



### 1.3 Bottle cap multi-use – Overview

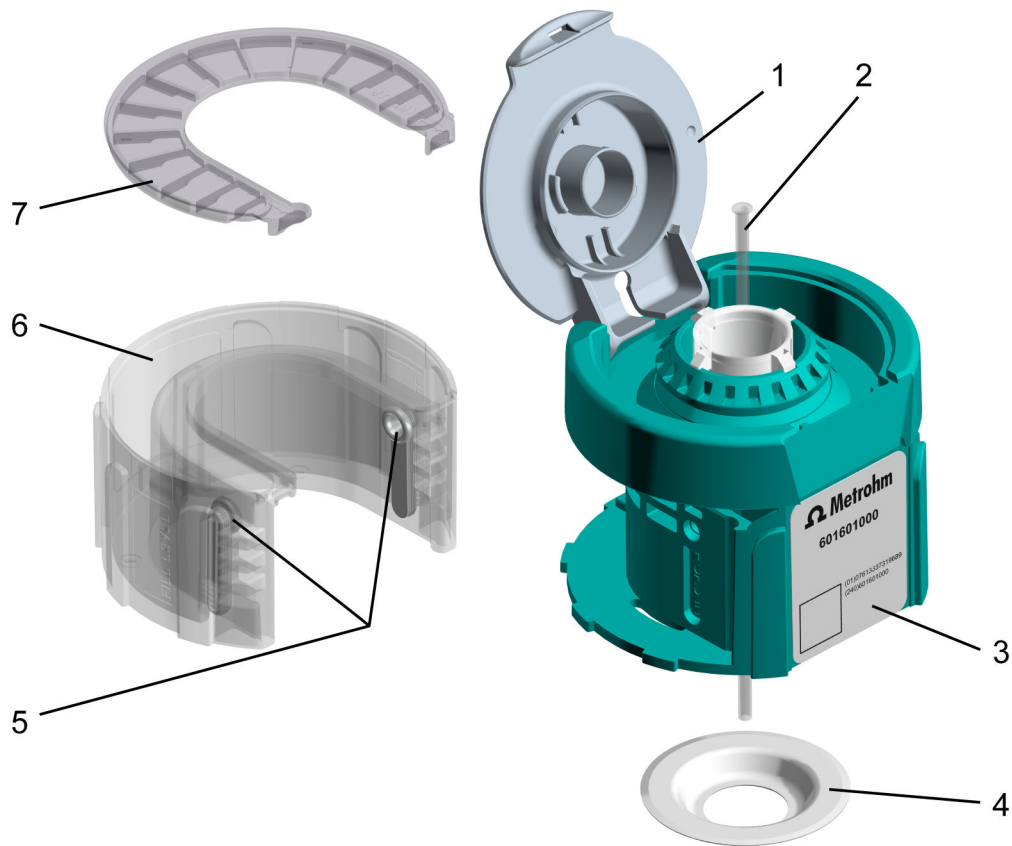


Figure 1 Bottle cap multi-use, complete (6.01601.000)

<b>1 Flip-top lid</b>	<b>2 Aspiration tubing</b> Aspiration tubing (6.1819.020)
<b>3 RFID tag</b> RFID chip for contact-free data transmission.	<b>4 PTFE sealing ring</b> PTFE sealing ring (6.02701.010)
<b>5 Absorption cartridge insert</b> (2 pieces)	<b>6 Absorption cartridge housing</b>
<b>7 Absorption cartridge lid</b>	<b>5–7 Absorption cartridge, complete</b> Absorption cartridge, complete (6.02701.000)



## 1.4 Symbols and conventions

The following formatting may appear in the documentation:

(5-12)	Cross-reference to figure legend The first number refers to the figure number. The second number refers to the product part in the figure.
<b>1</b>	Instruction step Numbers indicate the order of the instructions steps.
<b>Method</b>	Names of parameters, menu items, tabs and dialog windows
<b>File ► New</b>	Menu path
<b>[Continue]</b>	Button or key

## 1.5 Further information

The Metrohm Knowledge Base <https://guide.metrohm.com> always provides the current version of this document. Further instructions, leaflets, release notes etc. may be available, depending on the product. You can directly access the required information or the associated PDF document using the full-text search function and filters.

## 1.6 Accessories

Up-to-date information on the scope of delivery and on optional accessories can be found on the Metrohm website. Download this information as follows:

### Downloading the accessories list

- 1** Go to <https://www.metrohm.com>.
- 2** Enter the article number of the product (e.g. **2.1001.0010**) into the search field.  
The search result is displayed.
- 3** Click on the product.  
Detailed information regarding the product is shown on various tabs.



- 4 On the **Included parts** tab, click the link to download the PDF.  
The PDF file with the accessories data is loaded.



## NOTICE

Metrohm recommends downloading the accessories list from the Internet and keeping it for reference purposes.

## 2 Safety

### 2.1 Intended use

Metrohm products are used for the analysis and handling of chemicals.

Usage therefore requires the user to have basic knowledge and experience in handling chemicals. Knowledge regarding the application of fire prevention measures prescribed for laboratories is also mandatory.

Adherence to this technical documentation and compliance with the maintenance specifications make up an important part of intended use.

Any utilization in excess of or deviating from the intended use is regarded as misuse.

Specifications regarding the operating values and limit values of individual products are contained in the "Technical specifications" section, if relevant.

Exceeding and/or not observing the mentioned limit values during operation puts people and components at risk. The manufacturer assumes no liability for damage due to non-observance of these limit values.

The EU declaration of conformity loses its validity as soon as modifications are carried out on the products and/or the components.

### 2.2 Responsibility of the operator

The operator must ensure that basic regulations on occupational safety and accident prevention in chemical laboratories are observed. The operator has the following responsibilities:

- Instruct personnel in the safe handling of the product.
- Train personnel in the use of the product according to the user documentation (e.g. install, operate, clean, eliminate faults).
- Train staff on basic occupational safety and accident prevention regulations.
- Provide personal protective equipment (e.g. protective glasses, gloves).
- Provide suitable tools and equipment to carry out the work safely.

The product may be used only when it is in perfect condition. The following measures are required to ensure the safe operation of the product:

- Check the condition of the product before use.
- Remedy defects and malfunctions immediately.
- Maintain and clean the product regularly.



- Label the product according to regulations if it is used for substances that have a potential for chemical hazards and are generally subject to the Hazardous Substances Ordinance.
- Wear personal protective equipment (e.g. protective glasses, gloves).
- Use exhaust equipment when working with vaporizing hazardous substances.
- Dispose of hazardous substances in accordance with regulations.
- Clean and disinfect contaminated surfaces.
- Only use detergents that do not cause any unwanted side reactions with the materials to be cleaned.
- Dispose of chemically contaminated materials (e.g. cleaning material) in accordance with regulations.
- Proceed as follows in case of a return shipment to Metrohm AG or a regional Metrohm representative:
  - Decontaminate the product or product component.
  - Remove the labeling for hazardous substances.
  - Create a declaration of decontamination and enclose it with the product.

### **2.4.3 Danger from highly flammable substances**

Using highly flammable substances or gases may cause fires or explosions. To avoid danger from highly flammable substances, observe the following:

- Avoid ignition sources.
- Use protective grounding.
- Use exhaust equipment.

### **2.4.4 Danger from leaking liquids**

Leaking liquids may cause injuries and may damage the product. To avoid danger from leaking liquids, observe the following:

- Check the product and its accessories for leakages and loose connections.
- Replace leaking parts and connecting elements without delay.
- Tighten loose connecting elements.
- Do not loosen tubing connections under pressure.
- Do not remove aspiration tubing under pressure.
- Carefully pull the ends of the tubing out of the containers.
- Carefully let liquids from tubing drain into suitable containers.
- Insert the buret tips completely into the containers.
- Remove and dispose of leaked liquids in accordance with regulations.
- If you suspect that liquid has penetrated the instrument, disconnect the instrument from the energy supply. Then have the instrument checked by a regional Metrohm service representative.

### 2.4.5 Danger during transport of the product

Chemical or biological substances may be spilled during the transport of the product. Parts of the product may fall down or may be damaged. There is a risk of injury from chemical or biological substances and pieces of broken glass. To ensure safe transport, observe the following:

- Remove loose parts (e.g. sample racks, sample vessels, bottles) before transport.
- Remove liquids.
- Lift and transport the product with both hands on the base plate.
- Lift and transport heavy products only according to instructions.

## 2.5 Design of warning messages

There are 4 hazard levels for warning messages. The following signal words are used for classifying the hazard levels in warning messages:

- **DANGER** indicates a hazardous situation which, if not avoided, will result in serious injury or death.
- **WARNING** indicates a hazardous situation which, if not avoided, could result in serious injury or death.
- **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE** indicates a hazardous situation which, if not avoided, could result in property damage.

Warning messages differ in design (color and warning sign) depending on the hazard level:



### **DANGER**

#### **Type and source of danger**

Consequences when not observing the notice: An irreversible injury that may result in death is very probable.

- Measures to avoid the danger



## WARNING

### Type or source of danger

Consequences when not observing the notice: A serious injury that may result in death is probable.

- Measures to avoid the danger



## CAUTION

### Type or source of danger

Consequences when not observing the notice: A minor to moderate injury is probable.

- Measures to avoid the danger





## 2.6 Meaning of warning signs

This documentation uses the following warning signs:

Table 2 Warning sign according to ISO 7010

Warning sign	Meaning
	General warning sign
	Warning of electrical voltage
	Warning of hand injuries
	Warning of sharp object
	Warning of hot surface
	Warning of biological hazard
	Warning of toxic materials



Warning sign	Meaning
	Warning of flammable materials
	Warning of corrosive substances
	Warning of optical radiation
	Warning of laser beams

Depending on the intended use of the product, the corresponding warning sign stickers must be placed on the product.



### 3 Technical specifications

#### 3.1 Ambient conditions

Nominal function range	+5 to +45 °C	at max. 80% relative humidity, non- condensing
Storage	+5 to +45 °C	

#### 3.2 Bottle cap multi-use – Dimensions

##### Measurements

<i>Diameter</i>	79 mm
<i>Height</i>	64 mm

##### Weight

<i>Bottle cap</i>	133 g	with absorption car- tridge (empty)
<i>absorption cartridge</i>	30 g	(empty)

#### 3.3 Bottle cap multi-use – Housing

##### Materials

<i>Lid</i>	PP	polypropylene
<i>Enclosure</i>	PP	polypropylene
<i>absorption cartridge</i>	PP	polypropylene
<i>Absorption cartridge insert</i>	EPDM	ethylene propylene diene monomer, M- class
<i>Coupling spigot and air duct</i>	PFA	perfluoroalkoxy
<i>Sealing ring</i>	PTFE	poly(tetrafluoroethy- lene)

Bottle cap multi-use – Housing



*Aspiration tubing*

FEP

fluorinated ethylene  
propylene