



# Eppendorf® Vis Cuvettes

**Instructions for use**

Copyright ©2013 Eppendorf AG, Hamburg. No part of this publication may be reproduced without the prior permission of the copyright owner.

Eppendorf®, the Eppendorf logo, Eppendorf BioSpectrometer®, and Eppendorf BioPhotometer® are registered trademarks of Eppendorf AG, Hamburg, Germany.

Trademarks are not marked in all cases with ™ or ® in this manual.

## 1 Operating instructions

Before using the consumables for the first time, read these instructions for use and the operating manual of the device that you use the consumables with. You can find the current version of the operating manual on the Internet at [www.eppendorf.com/worldwide](http://www.eppendorf.com/worldwide). These instructions for use do not replace the device operating manual.

## 2 Product description

Eppendorf macro Vis Cuvettes and Eppendorf semi-micro Vis Cuvettes are plastic cuvettes for single use.

- Photometric measurements: Eppendorf Vis Cuvettes are suitable for measuring at wave lengths from 300 nm to 900 nm.
- Fluorimetric measurements: Eppendorf Vis Cuvettes are suitable for fluorimeters such as the Eppendorf BioSpectrometer fluorescence where the emitted light is measured in the direction of the incoming light. The cuvettes are not suitable for fluorimeters where the emitted light is measured perpendicular to the incoming light.
- Eppendorf macro Vis Cuvettes are suitable for temperature control for kinetic measurements.
- The direction of the light path is marked with an arrow.
- Recessed measuring windows to protect against scratches.
- Sorting by nest numbers: small deviations of the extinction values between the cuvettes of one packaging unit.

## 3 Safety

### 3.1 Intended use

Eppendorf Vis Cuvettes are plastic cuvettes for single use. They are used for the photometric and fluorimetric analysis of liquids. Eppendorf Vis Cuvettes are used in training, routine and research laboratories in the life sciences, in industry and, chemistry.

In-vivo applications (applications in or on the human body) are not permitted.

The device may only be operated by skilled personnel who have been trained in the areas mentioned above.

### 3.2 Warnings for intended use



#### **WARNING! Damages to health due to infectious liquids and pathogenic germs.**

- ▶ When handling infectious liquids and pathogenic germs, observe the national regulations, the biological security level of your laboratory, the material safety data sheets, and the manufacturer's application notes.
  - ▶ Wear personal protective equipment.
  - ▶ Consult the "Laboratory Biosafety Manual" (Source: World Health Organization, Laboratory Biosafety Manual, as amended) for comprehensive regulations on the handling of risk group II germs or biological materials).
-

## 4 **Operation**

### 4.1 Inserting the cuvette

#### Prerequisites

- The cuvette is free from contamination from dust or finger prints and free from scratches.
- Measuring volume in the cuvette is sufficient. Observe that the minimum measuring volume has been reached.
- Measuring solution is free from particles and bubbles.



#### **NOTICE! Material damage due to improper handling**

The cuvette may fall if it is not handled properly. Liquid may spray out.

- ▶ Store the cuvette in a cuvette stand.



#### **NOTICE! Faulty measured values due to incorrect orientation of the cuvette.**

- ▶ Always insert the cuvette in the same direction within a series of measurements. Do not rotate the cuvette 180° during a series of measurements.



Do not touch the optical surfaces of the cuvette.

The direction of the light path is marked with an arrow along the upper edge.

#### **Eppendorf BioPhotometer/Eppendorf BioSpectrometer**

- ▶ Position the cuvette in such a way that the measuring window points towards the light path.
- ▶ During insertion, press the cuvette all the way down against a slight resistance.

### 4.2 Temperature control for kinetic measurements

For an efficient temperature control of the measuring solution during kinetic measurements, the contact surface of the cuvette to the cuvette shaft must be as large as possible.

- ▶ Use the Eppendorf macro Vis Cuvettes for kinetic measurements

You can find notes on the temperature control of the cuvettes in the Eppendorf BioSpectrometer kinetic in the operating manual of the device.

**5 Technical data**

**5.1 Dimensions**

	<b>Eppendorf macro Vis Cuvettes</b>	<b>Eppendorf semi-micro Vis Cuvettes</b>
Width	12.5 mm (0.49 in)	12.5 mm (0.49 in)
Depth	12.5 mm (0.49 in)	12.5 mm (0.49 in)
Height	45 mm (1.77 in)	45 mm (1.77 in)
Filling volume		
Eppendorf BioSpectrometer, Eppendorf BioPhotometer (light path height 8,5 mm)	1 000 µL – 4 500 µL	400 µL – 3 000 µL
Devices with light path height of 15 mm	2 500 µL – 4 500 µL	1 500 µL – 3 000 µL

**5.2 Photometric properties**

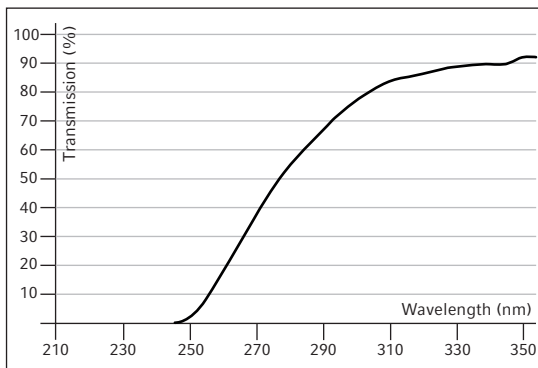


Fig. 1: Transmission of the water-filled Eppendorf Vis Cuvettes

	<b>Eppendorf macro Vis Cuvettes</b>	<b>Eppendorf semi-micro Vis Cuvettes</b>
Optical path length	10 mm	10 mm
Measuring window	10 mm × 35 mm	4.5 mm × 23 mm
Wavelength range	300 nm – 900 nm	300 nm – 900 nm
Cuvette blank scattering	$s \leq 0.004$ A at 320 nm	$s \leq 0.004$ A at 320 nm

**6 Ordering Information**  
Eppendorf® Vis Cuvettes  
English (EN)

5.3 Chemical resistance

Storage before use	Protect from direct sunlight and UV light. Store in dry conditions at room temperature.
Chemical resistance	Resistant to ammonia, hydrofluoric acid 10 %, hexane, isopropanol, caustic soda. Not resistant to acetone, benzaldehyde, chloroform, dioxane, dimethylformamide, acetic acid, ethylacetate, nitric acid 65 %, hydrochloric acid 36 %.

All data on chemical resistance refer to short-term resistance, 30 min max. The storage of these chemicals in the cuvettes must be tested by the user.

**6 Ordering Information**

Order no. (International)	Order no. (North America)	Description
0030 079.345	0030079345	<b>Eppendorf macro Vis Cuvettes</b> 10 × 100 pieces
0030 079.353	0030079353	<b>Eppendorf semi-micro Vis Cuvettes</b> 10 × 100 pieces
4308 078.006	940001102	<b>Cuvette stand</b> for 16 cuvettes





# Evaluate your manual

Give us your feedback.  
[www.eppendorf.com/manualfeedback](http://www.eppendorf.com/manualfeedback)

**Your local distributor: [www.eppendorf.com/worldwide](http://www.eppendorf.com/worldwide)**  
Eppendorf AG · Hamburg · Germany · Phone: +49 40 538 01-0

[www.eppendorf.com](http://www.eppendorf.com)