Cuvettes

For more than 25 years, BRAND has been one of the leading manufacturers of disposable plastic cuvettes. Macro and semi-micro cuvettes of PS and PMMA are now standard in every laboratory. This product line was recently extended with the plastic UV-Cuvettes. The new UV-transparent cuvettes are available in various types and replace sensitive and expensive glass or quartz cuvettes in many areas.

Quality features:

- Clear, clean optical path with indication of optical path orientation
- Manufactured under controlled room conditions and packaged fully automatically, without human contact
- Packed grouped by mold cavity number to ensure lowest variation of extinction coefficient
- UV-Cuvettes available as micro, semi-micro and macro cuvettes

UV-Cuvette micro

Center height: 8.5 mm or 15 mm

Specially designed for photometric determination of proteins, ssDNA, dsDNA, RNA and oligonucleotides in the UV range. Usable starting from 220 nm. Ideally suited for measurements at 260 nm, 280 nm and in the visible range. Standard 10 mm light path. Sample volumes as small as 70 µl are sufficient.
Individually wrapped UV-Cuvettes micro are free of DNase, DNA and RNase!

Center height mm	Pack of	Cat. No.
8.5	100	7592 00
8.5	500	7592 10
8.5	100 single wrapped, free of DNase, DNA and RNase	7592 15
15	100	7592 20
15	500	7592 30
15	100 single wrapped, free of DNase, DNA and RNase	7592 35

Information on selecting the UV-Cuvette **compatible with the beam height** of your photometer can be found at **www.brand.de**

Caps for UV-Cuvette micro

PE. Round covers allow a tight closure and make it possible to store samples down to -20 °C. Pack of 100.

Color	Cat. No.
blue	7592 40
yellow	7592 41
green	7592 42
orange	7592 43

UV-Cuvette macro and semi-micro

Ideally suited for determinations in water analysis, chemistry, and in life science applications. Usable with most polar solvents, acids and alkaline solutions. Drastically reduced risk of contamination and lower costs compared to quartz glass cuvettes. 10 mm light path. Pack of 100 per carton.

Description	Cat. No.
UV-Cuvette semi-micro	7591 50
UV-Cuvette macro	7591 70

Standard Cuvettes macro and semi-micro

PS and PMMA. Grouped by mold cavity number.
Pack of 1000 (10 boxes of 100 cuvettes per box.)

Description	Material	Cat. No.
macro cuvette	PS	7590 05
semi-micro cuvette	PS	7590 15
macro cuvette	PMMA	7591 05
semi-micro cuvette	PMMA	7591 15

Magnetic stir bars for macro cuvettes can be found on page 242-245.

Cuvette rack

PP, grey. Numbered positions. Autoclavable (121 °C).
Suitable for standard 10 mm path-length cuvettes. Pack of 1.

Description	Length mm	Width mm	Height mm	Cat. No.
for 16 cuvettes	210	70	38	7595 00

Disposable stirring spatula

PS. Pack quantity 10000 = 20 bags of 500 per pack.

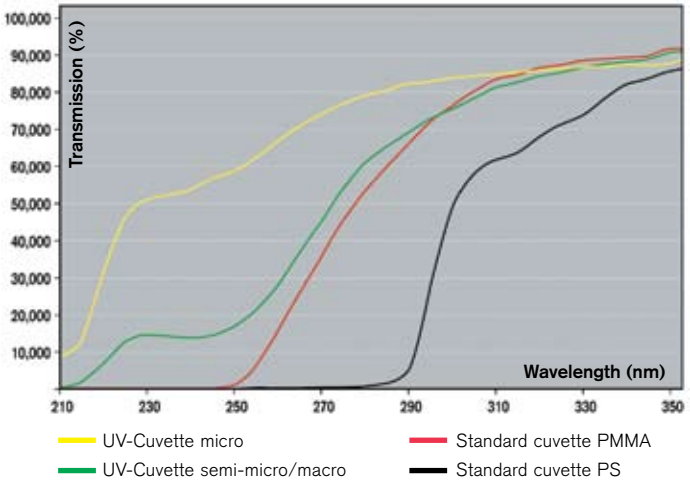
Description	Stem diameter mm	Length mm	Cat. No.
PS	3	120 mm	7598 00

Technical Data

Overview Table

Cuvette type	Filling volume min.	Filling volume max.	Dimensions Window (W x H)	Range of application	Standard deviation in extinction units
UV-Cuvette micro. z = 8.5	70 µl	850 µl	2 x 3.5 mm (min.)	from 220 to 900 nm	240 nm ≤ ± 0.007 300 nm ≤ ± 0.005
UV-Cuvette micro. z = 15	70 µl	550 µl	2 x 3.5 mm (min.)		
UV-Cuvette macro	2.5 ml	4.5 ml	10 x 35 mm		
UV-Cuvette semi-micro	1.5 ml	3.0 ml	4.5 x 23 mm		
macro cuvette (PMMA)	2.5 ml	4.5 ml	10 x 35 mm	from 300 to 900 nm	320 nm ≤ ± 0.004
semi-micro cuvette (PMMA)	1.5 ml	3.0 ml	4.5 x 23 mm		
macro cuvette (PS)	2.5 ml	4.5 ml	10 x 35 mm	from 340 to 900 nm	360 nm ≤ ± 0.005
semi-micro cuvette (PS)	1.5 ml	3.0 ml	4.5 x 23 mm		

Transmission curves of different cuvettes



To achieve reproducible results: Before the actual measurement, always determine the blank value for the cuvette, and determine the linear range of measurement by means of a calibration curve.

Chemical resistance* of plastic cuvettes

Substance	PS	PMMA	UV-Cuvette
Acetic acid, 100%	–	–	+
Acetone	–	–	+
Ammonia	+	+	+
Benzaldehyde	–	–	+
Butanone	–	–	+
Chloroform	–	–	–
Dioxane	–	–	+
DMF	–	–	+
Ethyl acetate	–	–	+
Hexane	–	+	–
Hydrochloric acid, 36%	+	–	+
Hydrofluoric acid, 10%	+	+	+
Isopropanol	+	+	+
Nitric acid, 65%	–	–	+
Sodium hydroxide	+	+	+

* Short time resistance, 30 min. Longer-term storage of these chemicals should be confirmed by the user. Request a free sample.

Grouping by Mold Cavity

A plastic injection mold with 8 separate cavities can produce 8 cuvettes at a time. Minor dimensional variations between the cavities are unavoidable despite the most advanced technology. This may result in a greater variation of extinction values between cuvettes from different cavities. Therefore, BRAND automatically packages cuvettes originating from the same cavity in each carton of 100, 500 or 1000 cuvettes to minimize variation in extinction coefficients.

For best results, use cuvettes from the same cavity number for each series of analyses.

Various photometric methods are currently available for determining the concentration and purity of nucleic acids and proteins.

Protein determination using UV cuvettes:

$C_{Protein\ (mg/ml)} = 1.55 \times A_{280\ nm} - 0.76 \times A_{260\ nm}$

Nucleic determination using UV cuvettes:

$C_{DNA\ (\mu g/ml)} = 50 \times A_{260\ nm} \times$ dilution factor

$C_{RNA\ (\mu g/ml)} = 40 \times A_{260\ nm} \times$ dilution factor