

BRAND Plastic Cuvettes

Why BRAND Disposable Cuvettes?

BRAND is world-renowned as the producer of premium disposable cuvettes. Each and every BRAND cuvette benefits from their nearly thirty years of experience manufacturing cuvettes to the most exacting standards for reproducible results.

- **Virgin resins:** BRAND cuvettes are manufactured from the highest quality virgin resins for superior optical quality. Choose polystyrene for determinations above 340nm, and where cost is a concern. Choose polymethyl methacrylate (PMMA or “acrylic”) when performing assays above 300nm. For assays with wavelengths as short as 230nm, or that require enhanced chemical compatibility, choose BRAND UV-Cuvettes, made of a proprietary resin.
- **Mold-cavity matching:** All plastic cuvettes are manufactured in multi-cavity molds, producing multiple cuvettes with each molding operation. Even with BRAND’s experience and attention to manufacturing detail, nothing can prevent slight differences among the cavities that can lead to variation in extinction coefficients. Rather than randomly aggregate cuvettes from all cavities, BRAND’s automated production process sorts the cuvettes by mold cavity; each package only contains cuvettes from the same mold cavity. This ensures the lowest possible cuvette-to-cuvette variance, and more accurate measurements. Robotic sorting also eliminates the risk of human error, and potential contamination.
- **Protective packaging:** BRAND cuvettes are encased in dust-free, low-scratching expanded polystyrene packaging. This ensures that your premium cuvettes arrive at your laboratory in the same pristine condition they were in at the factory, with optical quality windows, and free of contaminants. For applications in which the highest purity is required, BRAND ultra-micro UV-Cuvettes are available individually wrapped and free of DNA, DNase and RNase. Individual wrapping means that these cuvettes offer not only the convenience of disposability, but a degree of sample protection that is unmatched by any reusable cuvette.
- **NEW! Fluorimetry cuvettes:** BRAND brings their decades of experience molding high-quality spectrophotometry cuvettes to their new four-sided clear cuvettes for fluorimetry. Available in standard polystyrene and a proprietary polymer with ultra-low auto-fluorescence for the highest precision measurements.

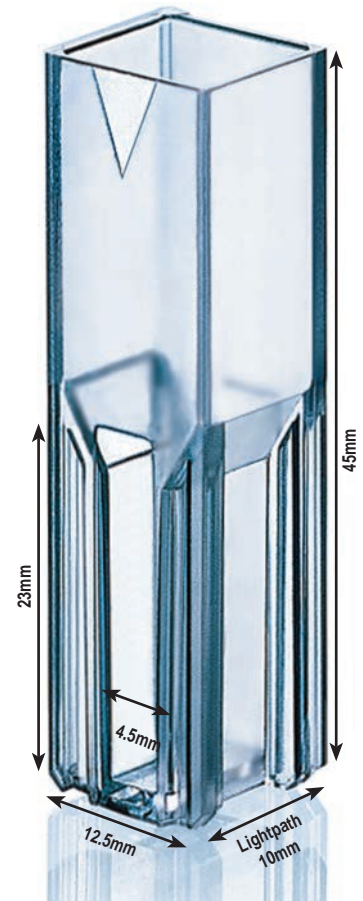
The BRAND logo,
your assurance of
a quality cuvette



Technical Data

BRAND plastic spectrophotometry cuvettes are an excellent choice for most spectrophotometry applications in the visible and UV ranges. When manufactured from PS and PMMA, they provide accurate, reliable results even at wavelengths as low as 300nm. For enhanced chemical compatibility, or measurements to 230nm, choose BRAND UV-Cuvettes. These disposable cuvettes are available in macro and semi-micro sizes to accommodate most sample volumes. BRAND plastic cuvettes are compatible with most spectrophotometers and photometers using a standard 10mm path length.

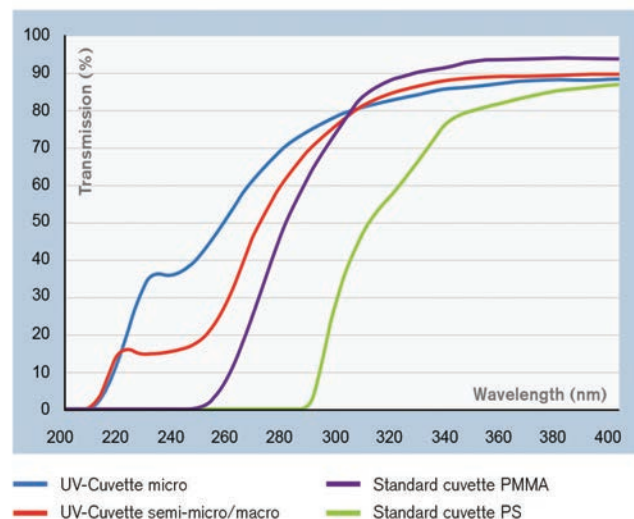
- **Easy to use:** BRAND plastic disposable cuvettes include an arrow mark to indicate direction of transmission and reduce variation.
- **Options for most needs:** PS and PMMA cuvettes are available in both macro and semi-micro sizes to adapt to the needs of most laboratory applications. Semi-micro cuvettes require only 1.5mL of sample volume to provide reliable, accurate results.
- **Perform consistently:** Cuvettes are manufactured from high-quality materials, and are grouped by manufacturing mold cavity number to ensure the lowest variation in extinction coefficient.
- **Manufactured by BRAND:** One of the world's largest producers of cuvettes, BRAND's nearly thirty years of quality cuvette manufacturing experience is your assurance of reliability.



BRAND semi-micro disposable cuvette

Description	Cat. No.	2016 List Price
BRAND polystyrene (PS) cuvettes (specifications on p. 103)		
Macro, pack of 500	759070D	\$79.96
Macro, pack of 100	759071D	18.39
Semi-micro, pack of 500	759075D	86.96
Semi-micro, pack of 100	759076D	19.39
BRAND methacrylate (PMMA) cuvettes (specifications on p. 103)		
Macro, pack of 500	759080D	112.95
Macro, pack of 100	759081D	25.59
Semi-micro, pack of 500	759085D	97.96
Semi-micro, pack of 100	759086D	21.39
Polypropylene cuvette rack, 16 numbered positions	759500	25.48

Transmission curves of different cuvettes



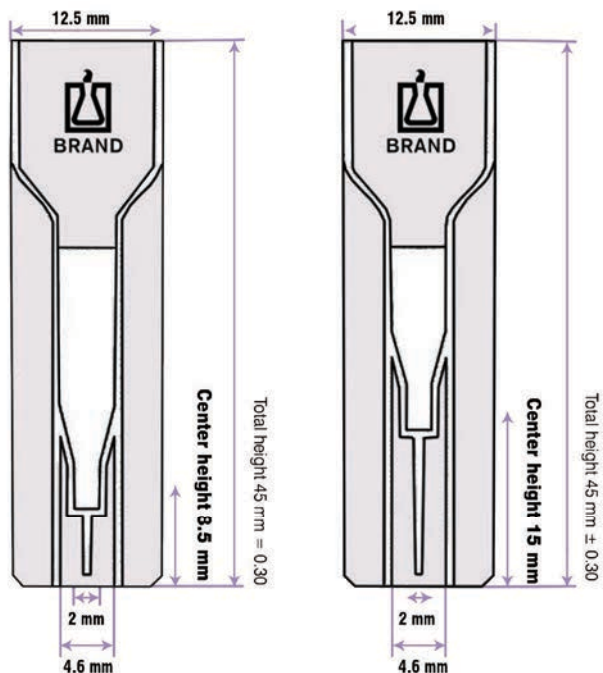
— UV-Cuvette micro — Standard cuvette PMMA
— UV-Cuvette semi-micro/macro — Standard cuvette PS

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.

BRAND UV-Cuvettes

UV-transparent, disposable cuvettes from BRAND replace expensive, fragile quartz cuvettes and are excellent for DNA, RNA, and protein analyses between 230-900nm. See transmission curves on page 101. Made from a proprietary polycyclical olefin, they are resistant to many aggressive solvents and eliminate the tedious maintenance, cleaning, and contamination risk of quartz cuvettes. Additionally, they fit most commercial spectrophotometers and photometers without requiring the use of special adapters.

- **Eliminate the hassles of quartz cuvettes:** Eliminate the washing, cross-contamination, breakage and expense associated with fragile quartz cuvettes.
- **Allow smaller sample sizes:** In addition to macro and semi-micro sizes that require 2.5mL and 1.5mL of sample volume, respectively, BRAND UV-Cuvettes are available in ultra-micro sizes that require only 70µL of sample volume.
- **Ultra-micro cuvettes are available individually-wrapped:** Independently-certified DNA-, DNase-, RNase-free for an extra degree of sample protection.
- **Resist most chemicals:** Cuvettes may be used with most polar organic solvents, as well as a broad range of acids and bases. They have much greater chemical resistance than PS or PMMA cuvettes and are compatible with chemicals such as acetone, butanone, DMF, and concentrated hydrochloric acid.
- **Perform consistently:** Cuvettes are manufactured from scratch-resistant materials, and are grouped by manufacturing mold cavity number to ensure the lowest variation in extinction coefficient.
- **Manufactured by BRAND:** BRAND is one of the world's largest cuvette manufacturers. Nearly thirty years of experience producing quality cuvettes is your assurance of reliability.



Two window heights to fit most spectrophotometers

To reduce the sample size required by BRAND's ultra-micro sized UV-Cuvettes, the floor of the sample chamber is elevated to just below the light path. As there is not a single standard for light beam height, BRAND offers ultra-micro cuvettes with two different z-dimensions, to help you conserve your sample.

Not sure of the beam height of your instrument?
Check our website for help with cuvette selection
www.brandtech.com/beam_heights.



Polypropylene cuvette rack with 16 numbered positions.
Autoclavable to 121°C (250°F)



Specifications – BRAND Cuvette

Filling volume	Ultra-micro	Semi-micro	Macro
Minimum	70µL	1.5mL	2.5mL
Maximum	550µL (15mm window) 850µL (8.5mm window)	3.0mL	4.5mL
Window dimensions	2 x 3.5mm (minimum)	4.5 x 23mm	10 x 35mm
Light path	10mm	10mm	10mm
Range of application UV	230-900nm	230-900nm	230-900nm
Range of application PMMA	—	300-900nm	300-900nm
Range of application PS	—	340-900nm	300-900nm

www.brandtech.com/cuvette_comp.asp for additional cuvette compatibility information.



BRAND ultra-micro UV-Cuvettes. 15mm (left) and 8.5mm (right) window heights

UV-transparent, chemical-resistant, and disposable...
save time and money



Round polyethylene caps provide plug-seal for reliable sample storage. Available in 4 colors!

Description	Qty./Pack	Cat. No.	2016 List Price
BRAND UV-Cuvette (specifications below)			
Macro	100	759170	\$83.96
Semi-micro	500	759165	376.83
Semi-micro	100	759150	83.96
BRAND UV-Cuvette ultra-micro (15mm window height)	500	759230	376.83
BRAND UV-Cuvette ultra-micro (15mm window height)	100	759220	83.96
Individually-wrapped BRAND UV-Cuvette ultra-micro (15mm window height)	100	759235	122.95
BRAND UV-Cuvette ultra-micro (8.5mm window height)	500	759210	376.83
BRAND UV-Cuvette ultra-micro (8.5mm window height)	100	759200	83.96
Individually-wrapped BRAND UV-Cuvette ultra-micro (8.5mm window height)	100	759215	122.95
Cuvette caps and accessories			
Cuvette caps, round, for ultra-micro cuvettes, Blue	100	759240	27.39
Cuvette caps, round, for ultra-micro cuvettes, Yellow	100	759241	27.39
Cuvette caps, round, for ultra-micro cuvettes, Green	100	759242	27.39
Cuvette caps, round, for ultra-micro cuvettes, Orange	100	759243	27.39
Polypropylene cuvette rack, 16 numbered positions	1	759500	25.48

Examples of chemical resistance of UV-Cuvettes

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

BRAND Fluorimetry Cuvettes

NEW!

When results count, choose BRAND disposable cuvettes with four optically clear sides for fluorescence applications. Available in high quality polystyrene for measurements from 340nm to 800nm, as well as a proprietary polymer for precise measurements in both the visible and UV-range (230-800nm), allowing for shorter excitation wavelength than have been traditionally possible with disposable cuvettes. This UV-transparent plastic also has virtually no autofluorescence for high signal-to-noise ratios. Cuvettes have a standard 10mm light path for use in all standard fluorimeters.

BRAND fluorescence cuvettes, like all BRAND cuvettes, are made of the highest quality raw materials, precision molded for the best optical clarity, with parallel walls of uniform thickness to optimize transmission and minimize refraction. They are then mold-cavity sorted ensuring cuvette-to-cuvette consistency for highly reproducible results. With an industry standard 10mm light path, BRAND 4 sided clear cuvettes fit most common fluorimeters.

Cuvettes are packaged in trays containing 100 cuvettes. Trays are made of low-dust, non-scratching, expanded polystyrene.

- **Mold-cavity sorted:** Each tray contains cuvettes from a single mold cavity to minimize variability between cuvettes.
- **Manufactured by BRAND:** One of the leading manufacturers of premium quality disposable cuvettes for nearly thirty years, BRAND is your assurance of reliability.

Technical Data

Specifications – BRAND Fluorimetry Cuvettes

Minimum filling volume	2.5mL
Maximum filling volume	4.5mL
Window dimensions	10 x 35mm
Light path	10mm
Exterior dimensions	12.5 x 12.5 x 45mm

Description	Cat. No.	2016 List Price
BRAND polystyrene (PS) Fluorimetry Cuvettes		
Pack of 100	759030	\$19.00
Pack of 500	759035	80.00
BRAND UV-transparent Fluorimetry Cuvettes		
Pack of 100	759125	85.00
Pack of 500	759128	380.00



About fluorescence measurement

Fluorescence occurs when energy is supplied to a sample by electromagnetic radiation, usually UV-light (photons). The energy “excites” the molecules thereby “kicking” an electron of an atom from a lower energy state into an excited higher energy state. The lifetime of the excited state is very short (1-100ns). When the electron falls back to a lower energy state it releases the energy in the form of light i.e. fluorescence. Some of the fluorescent light passes through a monochromator and then reaches a detector. The fluorescent light is emitted in all directions, however the detector is usually placed at 90° to the excitation light beam to minimize interference. Hence the need for four-sided clear cuvettes for fluorescence applications.