

PFA Trace Analysis Labware

Properties

VITLAB® trace analysis labware from BrandTech® Scientific is manufactured from PFA (a perfluoroalkoxy copolymer), which is highly resistant to heat and chemical contamination and has surface properties that greatly simplify cleaning. Use this labware for excellent results in ICP-MS, production and storage of trace analysis standards, isotope separations, sample digestions and more.

With the increasing need in trace analysis labs for ultra-low concentration determinations in the ng/g (ppb) and pg/g (ppt) range, the use of PFA labware has become more and more important. Other materials, when not specially treated, may be subject to interaction between the vessel and the sample, standards or reagents it contains. This may cause incorrect results with modern trace analysis instrumentation.

All BrandTech® VITLAB® PFA trace analysis labware features visible, accurate, and permanent graduations for precise measuring. PFA Labware is suitable for sterilization using heat, gas, and chemical methods for handling sensitive biological solutions. BrandTech® also offers corrosion-resistant PFA (Technical Grade) with small amounts of pre-consumer high-quality recycled PFA, for customers who need only the chemical resistance of PFA. See page 113.

Performing Trace Analysis?

See the new BRAND Dispensette® TA bottle-top dispenser for Trace Analysis on page 37.

Excellent Temperature Stability: BrandTech®'s VITLAB® PFA trace analysis labware maintains its stability in temperatures from -200°C to 250°C (-328°F to 482°F).

No Leachable Metals: PFA is manufactured without metals such as calcium, aluminum, iron, magnesium, nickel, copper, manganese or zinc. These metals can leach into samples from other containers, and contaminate samples.

Simplified Cleaning: Conventional labware for trace analysis requires time-consuming and expensive cleaning. The hydrophobic and anti-adhesive properties of the exceptionally smooth-surfaced PFA labware simplify the cleaning process, making it ideal for trace analysis.

Superior Chemical Resistance: PFA is inert with most reagents, including the nitric and hydrochloric acid routinely used in cleaning trace analysis labware. This stability significantly reduces the risk of cross-contamination.

Excellent Long-Term Stability: PFA containers often extend the stability of low (ppb) concentration standards. Such stability reduces the time and cost of renewing trace analysis standard solutions.

Highly Translucent: Translucency is important for making accurate measurements using volumetric labware.

Please see page 126 for description of various plastics.

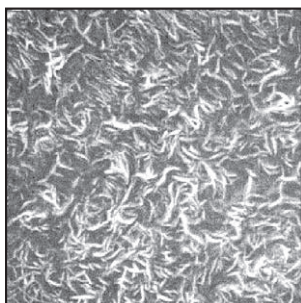
VITLAB®

VITLAB® PFA Labware: Pure, Cleanable, Rugged.

Scanning electron microscopy illustrates the advantages of PFA in trace analysis. (Magnification: 8000X)

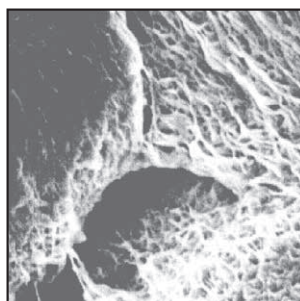
Bottle – HDPE

Scanning electron microscopy of this bottle wall shows the roughness of HDPE. The increased surface area of HDPE can lead to carryover of reagent molecules.



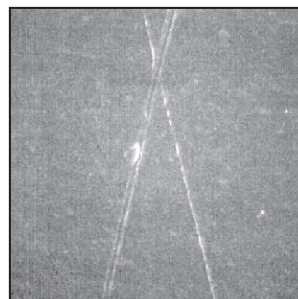
Beaker – PTFE

Similar to HDPE, electron micrographs of this beaker reveal a typically rough surface that can interact with reagent molecules and complicate cleaning.



Evaporating dish – PFA

Even at 8000x magnification, the surfaces of this PFA evaporating dish are very smooth. It is this smoothness, combined with PFA's hydrophobic, anti-adhesive and inert properties, that simplify cleaning.



PFA Trace Analysis Labware



Low-Form Griffin Beakers, PFA

- Molded graduations are easy to read and resistant to wear from repeated use.
- Nesting design conserves bench and storage space.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Meets the requirements of ISO 7056.

ORDERING INFORMATION

Volume mL	Grad mm	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
25	5	50	32	1	V110205	\$34.00
50	10	59	39	1	V110305	43.00
100	20	72	50	1	V110405	61.00
250	50	96	67	1	V110605	100.00
500	100	122	88	1	V110905	152.00
1000	100	141	109	1	V111005	273.00



Volumetric Flasks with Screw Caps, PFA

- Flasks feature individually calibrated ring-markings.
- Durable markings are easy to read. Limit cleaning temperature to 60°C (140°F) to preserve ring mark.
- High-transparency simplifies meniscus verification.
- PFA screw caps help protect against outside contamination and leakage.
- Meets Class A tolerances per DIN EN ISO 1042.
- Easy to clean. Autoclavable at 121°C (250°F) without affecting tolerances.

ORDERING INFORMATION

Volume mL	Tolerance mL	Height mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
10	0.04	90	18	1	V107097	\$231.00
25	0.04	115	18	1	V107197	232.00
50	0.06	150	18	1	V107297	237.00
100	0.10	180	18	1	V107397	293.00
250	0.15	235	25	1	V107497	368.00
500	0.25	270	25	1	V107597	424.00



Evaporating Dishes, PFA with Snap on Lid, PE

- Evaporating dishes are autoclavable, easy to clean, and withstand temperatures from -200°C to 250°C. Lid is not autoclavable.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
25	25	50	1	V103297	\$77.00
50	54	50	1	V103397	103.00

PFA Trace Analysis Labware



Wide Mouth Reagent Bottles with Screw Caps, PFA

- Leach-resistant bottles for long-term storage of solvents and standards.
- PFA screw caps have a molded sealing ring for a positive seal.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread	Qty./Pack	Cat. No.	2014 List Price
250	150	61	S40	1	V109497	\$196.00
500	179	76	S40	1	V109597	271.00
1000	217	96	S40	1	V109697	376.00
2000	245	130	S40	1	V109797	775.00



Narrow Mouth Reagent Bottles with Screw Caps, PFA

- Leach-resistant bottles for long-term storage of solvents and standards.
- PFA screw caps have a molded sealing ring for a positive seal.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread	Qty./Pack	Cat. No.	2014 List Price
50	86	37	S28	1	V109297	\$113.00
100	120	45	S28	1	V109397	161.00
250	160	61	S28	1	V108297	187.00
500	190	76	S28	1	V108397	256.00
1000	240	96	S28	1	V108497	353.00



Round Bottom Flasks, PFA

- For rotary evaporators and distillation of high-purity chemicals.
- With 29/32 ground socket.
- Translucent surfaces simplify solvent monitoring.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Maximum temperature under vacuum is 50°C (122°F).

ORDERING INFORMATION

Volume mL	Height mm	Neck mm	Diameter	Qty./Pack	Cat. No.	2014 List Price
100	117	29/32	65	1	V107797	\$153.00
250	147	29/32	88	1	V107897	180.00
500	177	29/32	107	1	V107997	246.00

PFA Trace Analysis Labware



Sample Containers with Screw Cap, PFA

- For sample collection, transport and storage.
- Supplied with a PFA screw cap.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.

ORDERING INFORMATION

Volume mL	Height mm	Diameter mm	Thread GL	Qty./Pack	Cat. No.	2014 List Price
30	54	38	40	1	V130297	\$73.00
60	90	38	40	1	V130397	88.00
90	62	54	56	1	V130497	68.00
180	112	54	56	1	V130597	123.00



Narrow Neck Reagent Bottles with Screw Cap, PFA, Technical Grade

- For sample collection, transport and storage.
- Supplied with a ETFE screw cap.
- Autoclavable, easy to clean, withstand temperatures from -200°C to 250°C.
- Offers the full chemical resistance of PFA, but may not be suited for trace analysis applications.

ORDERING INFORMATION

Volume mL	Thread GL	Height mm	Diameter mm	Qty./Pack	Cat. No.	2014 List Price
50	18	90	37	1	V108092	\$63.00
100	18	114	45	1	V108192	84.00
250	25	157	61	1	V108292	138.00
500	25	189	76	1	V108392	198.00
1000	32	233	96	1	V108492	272.00