

For Trace Analysis  
Pure, Cleanable, Rugged.



# PFA Labware

F I R S T C L A S S . B R A N D

- Excellent temperature stability
- No leachable metals
- Simplified cleaning
- Superior chemical resistance
- Excellent long-term stability
- Highly translucent



# High purity PFA...



## Griffin beakers

low-form

Volume ml	Graduation ml	Height mm	Ø mm	Cat. No.
25	5	50	32	901 20
50	10	59	39	901 28
100	20	72	50	901 38
250	50	96	67	901 48
500	100	122	88	901 54
1000	100	141	109	901 62

- 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, temperature resistant from -200 °C to 260 °C
- Meet the requirements of ISO 7056
- Pack of 1



## Volumetric flasks, class A

with screw cap

Volume ml	Error limit ± ml	Height* mm	Thread	Cat. No.
10 W	0.04	90	GL 18	362 08
25	0.04	108	GL 18	362 20
50	0.06	143	GL 18	362 28
100	0.10	166	GL 18	362 38
250	0.15	222	GL 25	362 48
500	0.25	262	GL 25	362 54

W = Wide neck \* without screw cap

Thread	Cat. No.
GL 18	1292 50
GL 25	1292 52

### Replacement screw caps for volumetric flasks PFA

PFA. Pack of 1.

- PFA
- Error limits according to class A, DIN EN ISO 1042
- With batch certificate
- Durable, individually calibrated and easy to read ring-markings
- Highly-transparent material simplify meniscus verification
- PFA screw cap with molded sealing ring for a positive seal
- Autoclavable, easy to clean
- Exposure to temperatures up to 121 °C (autoclaving) will not cause permanently exceeded error limits!
- Pack of 1



## Evaporating dishes

with snap-on lid

Volume ml	Cat. No.
25	458 00
50	458 02

- Evaporating dish PFA, snap-on lid PE
- Autoclavable, easy to clean, and withstand temperatures from -200 °C to 260 °C. (Lid is not autoclavable.)
- Pack of 1

# ...greatly simplify cleaning...



## Wide-mouth bottles

with screw cap

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
250	61	150	S 40	1287 48
500	76	179	S 40	1287 54
1000	96	217	S 40	1287 62
2000	130	245	S 40	1287 64

Thread	Cat. No.
S 40	1292 62

### Replacement screw cap for wide-mouth PFA bottles

PFA. Pack of 1.

- PFA
- High-quality bottles, specially designed for long-term storage of solvents and standards (trace analysis).
- PFA screw cap with integrated seal lip and buttress thread.
- Autoclavable, easy to clean, temperature resistant from -200 °C to +260 °C
- Pack 1



## Narrow-mouth bottles

with screw cap

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
50	37	86	S 28	1289 28
100	45	120	S 28	1289 38
250	61	160	S 28	1289 48
500	76	190	S 28	1289 54
1000	96	240	S 28	1289 62

Thread	Cat. No.
S 28	1292 60

### Replacement screw cap for narrow-mouth PFA bottles

PFA. Pack of 1.

- PFA
- High-quality, specially designed for long-term storage of solvents and standards (trace analysis)
- PFA screw cap with integrated seal lip and buttress thread
- Autoclavable, easy to clean, temperature resistant from -200 °C to +260 °C
- Pack 1



## Sample jars

with screw cap

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
30	38	54	GL 40	620 05
60	38	90	GL 40	620 10
90	54	62	GL 56	620 15
180	54	112	GL 56	620 20

Thread	Cat. No.
GL 40	1292 54
GL 56	1292 56

### Replacement screw caps for PFA sample jars

PFA. Pack of 1.

- PFA
- For sampling, transport and storage
- PFA screw cap with integrated seal lip
- Autoclavable, easy to clean, temperature resistant from -200 °C to 260 °C
- Pack 1

# ...and highly resistant to heat



## Sample tubes

with screw cap

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
15	22	110	GL 25	<b>7794 20</b>

- PFA
- For sample preparation
- 15 ml tube with individually calibrated ring mark at 10ml
- PFA-screw cap with integrated seal lip
- Autoclavable, easy to clean, temperature resistant from -200 °C to 260 °C
- Pack of 1

## Technical quality PFA



## Narrow-mouth bottles

with screw cap

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
50	37	90	GL 18	<b>1304 80</b>
100	45	114	GL 18	<b>1304 82</b>
250	61	157	GL 25	<b>1304 84</b>
500	76	189	GL 25	<b>1304 86</b>
1000	96	233	GL 32	<b>1304 88</b>

- Economically priced narrow-mouth bottles made of technical quality PFA\*
- ETFE screw caps
- Pack of 1

\* These bottles include components made of reprocessed PFA material from our production process. Physical properties and chemical resistance equivalent to highly-pure PFA.

Thread	Cat. No.
GL 18	<b>1292 70</b>
GL 25	<b>1292 72</b>
GL 32	<b>1292 74</b>

### Replacement screw caps for narrow-mouth bottles, technical quality PFA

ETFE. Pack of 1.



## Narrow-mouth wash bottles

Capacity ml	Ø mm	Height mm	Thread	Cat. No.
250	61	157	GL 25	<b>1438 48</b>
500	76	189	GL 25	<b>1438 54</b>
1000	96	233	GL 32	<b>1438 62</b>

- Technical quality PFA\*
- ETFE screw caps, FEP wash elements. The tip opening can be enlarged by cutting.
- High temperature and chemical resistance
- Pack of 1

\* These bottles include components made of reprocessed PFA material from our production process. Physical properties and chemical resistance equivalent to highly-pure PFA.

Thread	Cat. No.
GL 25 - FEP delivery tube	<b>1292 73</b>
GL 32 - FEP delivery tube	<b>1292 75</b>

### Replacement wash heads

ETFE. Pack of 1.

# PFA Trace Analysis

## BRAND Labware

BRAND trace analysis labware is manufactured from high purity 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 ultralow 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 BRAND 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.

Besides of high purity PFA products BRAND also offers technical quality PFA products which may contain a small fraction of reprocessed PFA from our production process.

## Properties

### Excellent temperature stability

BRAND PFA trace analysis labware maintains its stability in temperatures from -200 °C to 260 °C (-328 °F to 500 °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 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

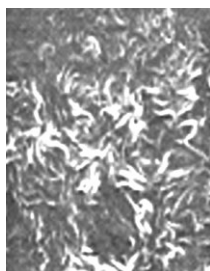
Translucency is important for making accurate measurements using volumetric labware.



## Advantages of PFA in trace analysis

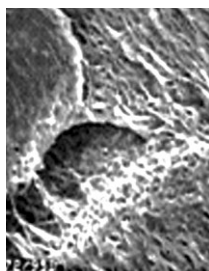
Scanning electron microscopy illustrates the advantages of PFA in trace analysis. (Magnification: 8000X)

### Bottle – HDPE



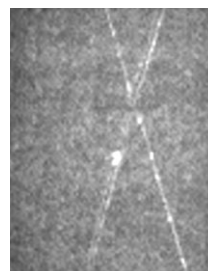
Scanning electron microscopy of this bottle wall shows the roughness of HDPE. The increased surface area of HDPE can lead to carryover of reagents.

### Beaker – PTFE



Similar to HDPE, electron micrographs of this beaker reveal a typically rough surface that can interact with reagents 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.



# Dispensette® S Trace Analysis

The ideal supplement


The bottle-top dispenser Dispensette® S Trace Analysis is designed for use in trace analysis. The high-purity materials of the dispenser release virtually no metal ions. Innovative ideas – trusted technology.



Replaceable dispensing cartridge supplied with certificate

## Trusted technology

- Parts in contact with media consist of high-purity materials such as PTFE, ETFE, PCTFE, FEP and PFA. The purest sapphire is used for replaceable valves. Depending on the application, platinum-iridium or tantalum are available as spring materials.
- A field-tested cleaning process before use in trace analysis is described in the operating manual.
- If contamination of the bottle contents must be avoided when used in trace analysis, we recommend using the dispenser without recirculation valve.
- The valve block can be rotated 360° so that the bottle label always faces the user for safety
- Telescoping filling tube adjusts to different bottle sizes
- The 45 mm standard thread plus the included adapters fit common lab bottles
- Easy disassembly for replacement of the dispensing cartridge
- DE-M marking\*

\* legally replaces  since January 1, 2015

## Recommended application range

Dispensing medium	Valve spring Pt - Ir	Valve spring Ta
Acetic acid	+	+
Ammonia solution	+	+
Bromine	+	+
Hydrochloric acid	+	+
Hydrofluoric acid**	+	-
Hydrogen peroxide	-	+
Nitric acid	+	+
Perchloric acid	+	+
Phosphoric acid	+	+
Sodium hydroxide, 30%	+	-
Sulfuric acid	+	+
Water	+	+

+ suitable – not suitable

\*\* Hydrofluoric acid reacts slightly with sapphire resulting in mildly elevated aluminum values. To reduce these values we recommend discarding 3-5 dispensings of 2 ml each before performing the analysis.

The above recommendations reflect testing completed prior to publication. Always follow instructions in the operating manual of the instrument as well as the reagent manufacturer's specifications. Should you require information on chemicals not listed, please feel free to contact BRAND. Status as of: 1115/2

Additional Information can be found at [www.brand.de](http://www.brand.de)

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