

# NAFLON™ PFA CHEMICAL WARES



NAFLON™ PFA CHEMICAL WARES are the containers made from PFA fluorocarbon resin and made by the blow molding method. They have the exceptional chemical resistance, and little elution of impurities for almost all kinds of fluids. What is more, they have higher mechanical strength compared with the glass wares and are unbreakable even if dropped.

## Features

- Superior chemical resistance for the strong acids, alkalis and solvents or most corrosive fluids on the market.
- Little elution of impurities.
- High mechanical strength compared with the glass wares.
- High transparency for easily checking the level of the inner fluids.
- Equipped with inside plugs that improve the sealing performance.
- Easily-identifiable date marks punched at the bottom of each ware.
- Wide variety of product lineups, ranging from 20ml to 10L.

## Specifications

### Lineup

Lineup	Capacity	Parts
Narrow Mouth Bottles	50mL, 100mL, 250mL, 500mL, 1L, 2L, 3L, 5L, 10L	Main Body, Inside Plug, Cap
Wide Mouth Bottles	20mL, 100mL, 250mL, 500mL, 1L	Main Body, Inside Plug, Cap
Erlenmeyer Flasks	100mL, 200mL, 300mL	Main Body

### Service Range

We recommend that they be used at the ordinary temperatures and pressures. In case of the usage to be heated or pressurized, you are recommended to carry out the verification test on your own according to the application.

## Sizes

### Narrow Mouth Bottles

Capacity	Size	Height (mm)	Outer Diameter of body (mm)
50mL		72	49
100mL		102	48
250mL		134	61
500mL		171	73
1L		203	92
2L		240	126
3L		270	148
5L		325	172
10L		357	228

### Wide Mouth Bottles

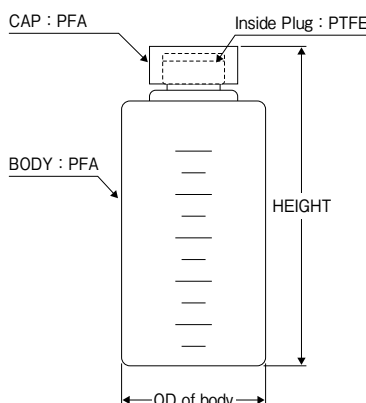
Capacity	Size	Height (mm)	Outer Diameter of body (mm)
20mL		63	27
100mL		106	49
250mL		138	61
500mL		180	73
1L		212	93

### Erlenmeyer Flasks

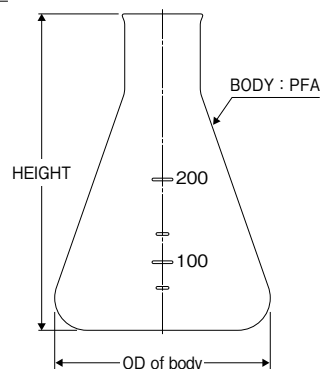
Capacity	Size	Height (mm)	Outer Diameter of body (mm)
100mL		98	64
200mL		123	79
300mL		130	88

\*For enquiries about capacities please contact us for shapes and others.

### ■ Narrow Mouth Bottles • Wide Mouth Bottles



### ■ Erlenmeyer Flasks



## Features

### Eluted Metals Measurement Results

**1 Specimen (n=2)** ..... Size ● Narrow Mouth Bottles 500ml and 1L

**2 Test Methods** ..... A specimen is filled with 3.6% hydrochloric acid with its mouth wrapped by polyethylene. It is stored at an ordinary temperature for one day, the 14 kinds of eluted metals are measured (first time) by ICP-MS method (Test Machine : Agilent Technologies). After washing with ultrapure water, it is stored for an extra day in the same way, then the eluted metals are measured (Second time).

(unit : ppb)

### 3 Test Results

Element \ Specimen	First time		Second time	
	500mL	1L	500mL	1L
Na (Sodium)	0.16	0.21	<0.01	<0.01
Mg (Magnesium)	<0.01	<0.01	<0.01	<0.01
Al (Aluminum)	<0.01	<0.01	<0.01	<0.01
K (Potassium)	0.11	0.07	<0.01	<0.01
Ca (Calcium)	0.41	0.43	0.02	<0.01
Ti (Titanium)	<0.04	<0.04	<0.04	<0.04
Cr (Chromium)	<0.01	<0.01	<0.01	<0.01
Mn (Manganese)	<0.01	<0.01	<0.01	<0.01
Fe (Iron)	0.04	0.02	<0.01	<0.01
Ni (Nickel)	<0.01	0.02	<0.01	<0.01
Cu (Copper)	<0.02	0.02	<0.01	<0.01
Zn (Zinc)	<0.02	0.03	<0.01	<0.01
Mo (Molybdenum)	<0.01	0.06	<0.01	<0.01
Pb (Palladium)	<0.01	<0.01	<0.01	<0.01
Detected amount of eluted metals	0.75	0.86	0.02	—

### Pressure cycle tests

**1 Specimen (n=1)** ..... Size ● Narrow Mouth Bottles 50ml, 100ml, 250ml, 500ml, 1L, 2L, 3L and 5L

**2 Test methods** ..... A PFA tube of 6 mm diameter with a fitting welded is connected into a specimen. After the cap is tightened by hand, the cycle of 100kPa x 10 sec ⇔ opening x 2 sec is made 1000 times. After the test, leakage and deformation are measured.

**3 Test results** ..... Each specimen has no leakage and deformation, excluding 5L.  
(For 5L, blisters are found at the bottom part of a bottle due to the cyclic pressure load)

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