

# **Beakers**

## Beakers, Low Form, Heavy Duty, Borosilicate Glass

Heavy duty beakers are ideal for tough handling conditions including mechanized washing. Beakers feature a white double graduated metric scale and a marking area. Tolerance is approximately  $\pm$  5%.

Item No.	Capacity (ml)	Grad. Range (ml)	Grad. Interval (ml)	Quantity per Pack	Quantity per Case
BG1003-100*	100	20-80	10	12	48
BG1003-150*	150	20-140	20	12	48
BG1003-250*	250	25-200	25	12	48
BG1003-400*	400	50-300	25	12	48
BG1003-600*	600	100-500	50	6	36
BG1003-1000	1000	100-900	50	1	24
BG1003-2000	2000	200-1800	200	1	8
BG1003-4000*	4000	500-3500	500	1	6



\*NEW SIZE

## Glass Beaker Set of 5, Borosilicate Glass



An ideal starter set for any laboratory, this set contains five borosilicate glass beakers in sizes 50ml, 100ml, 250ml, 600ml, and 1000ml.

Item No.	Description
BGSET5	Glass Beaker Set of 5, Borosilicate

Beaker sets can be private labeled. Please call for details.

## **Beaker Mugs, Borosilicate Glass**

These borosilicate glass beakers feature an attached handle and a smooth rim. The molecular structure of caffeine is enameled in white on one side, and the other side has dual metric graduations. Available in Low Form 400ml and Tall Form 600ml versions.

Item No.	Description
BGMG400	Beaker Mug, Low Form, 400ml
BGMG600-T	Beaker Mug, Tall Form, 600ml

Beaker mugs can be private labeled. Please call for details.

See our Flask Mug on page 63.



# **Properties of United Glassware**

#### **Chemical Composition:**

Our glassware is manufactured from low-expansion Type 1, Class A Borosilicate 3.3 glass that complies with ASTM E438 Standard Specification for Glasses in Laboratory Apparatus.

It is low alkali glass with a typical chemical composition of approximately 81% silica, 13% boric oxide, 4% sodium oxide, and 2% aluminum oxide. It is virtually free of magnesia-lime-zinc group, and contains only traces of heavy metals.

#### **Thermal Properties:**

Borosilicate glass has a low coefficient of thermal expansion. Therefore, the thermal stresses under a given temperature gradient are low, and the glass can withstand higher temperature gradients as well as sudden temperature changes / thermal shocks. However, even minute scratching of glass surface can reduce its thermal resistance.

The 'Strain Point' (about 500°C) is generally recommended as the maximum safe operating temperature for United glassware. The glass may acquire permanent stresses upon cooling if it is heated above 500°C. Our glassware is annealed in modern ovens under strictly controlled conditions to ensure minimal residual stress.

#### **Chemical Durability:**

United glassware is highly resistant to water, neutral and acid solutions, concentrated acids and their mixtures, as well as to chloride, bromine, iodine, and organic matters. Even during extended period of reaction and at temperatures above 100°C, its chemical resistance exceeds that of most metals and other materials. Our glassware can withstand repeated dry and wet sterilization and offers good resistance against various chemicals, except for hydrofluoric acid, hot phosphoric acid and alkaline solutions.

#### **Optical Properties:**

United glassware has a clear and colorless appearance, and shows no noticeable absorption in the visible region of the spectrum.

#### Safety

Treated with proper care, United glassware will offer long-term, reliable service in the laboratory. Please contact us for detailed recommendations regarding heating and cooling, mixing and stirring, vacuum and pressure, cleaning, and safety precautions that must be followed while using glassware.