

LIST OF VARIOUS LABORATORY GLASS WARES

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT COST	TOTAL COST	END USER
LABORATORY GLASS WARES						
1	30	unit	Beaker, low-form, with sprout, with printed graduations. Material: Borosilicate glass (clear). ISO 3819:2015 compliant. Nominal capacity: at least 100mL (within 10 to 25 mL graduation interval). External diameter: ($\pm 5\%$) 50mm. Maximum overall height: 72mm. Wall thickness: at least 0.9mm.	175	5,250.00	
2	30	unit	Beaker, low-form, with sprout, with printed graduations. Material: Borosilicate glass (clear). ISO 3819:2015 compliant. Nominal capacity: at least 250mL (within 10 to 50 mL graduation interval). External diameter: ($\pm 5\%$) 70mm. Maximum overall height: 97mm. Wall thickness: at least 1.1mm.	300	9,000.00	
3	20	unit	Beaker, tall-form, with sprout, with printed graduations. Material: Borosilicate glass (clear). ISO 3819:2015 compliant. Nominal capacity: 500 to 600mL (within 10 to 50 mL graduation interval). External diameter: ($\pm 5\%$) 79 to 80mm. Maximum overall height: 140 to 153mm. Wall thickness: at least 1.3mm.	525	10,500.00	
4	30	unit	Laboratory Conical Flask, narrow neck, Erlenmeyer style design, with printed graduation. Material: Borosilicate glass (clear). Compliant with ISO 1773:1997. Nominal capacity: 100mL (within 10 to 50 mL graduation interval). External diameter of body at widest point: 64 ± 1.5 mm. External diameter of neck: 22 ± 1 mm. Overall height: 105 ± 3 mm. Minimum wall thickness: 0.8mm. Neck length: 1 to 1.25mm times the external diameter of the neck. Dimensions of base: The radius at the junction between the base and the side of the flask shall be between 15% and 20% of the maximum external diameter.	250	7,500.00	
5	30	unit	Laboratory Conical Flask, narrow neck, Erlenmeyer style design, with printed graduation. Material: Borosilicate glass (clear). Compliant with ISO 1773:1997. Nominal capacity: 250mL (within 10 to 50 mL graduation interval). External diameter of body at widest point: 85 ± 2 mm. External diameter of neck: 34 ± 1.5 mm. Overall height: 145 ± 3 mm. Minimum wall thickness: 0.9mm. Neck length: 1 to 1.25mm times the external diameter of the neck. Dimensions of base: The radius at the junction between the base and the side of the flask shall be between 15% and 20% of the maximum external diameter.	440	13,200.00	
6	15	unit	Florence/ Flat Bottom Flask, Glass, 250ml, features a tooled top and a durable matte finish area for marking, promotes even heat distribution, resistant to chemical, mechanical and thermal shock, borosilicate glass, Capacity:250ml, Height: 140mm, Base Diameter: 86mm, Neck Diameter: 35mm, stopper size:#6	1500	22,500.00	
7	15	unit	Florence/ Flat Bottom Flask, Glass, 500ml, features a tooled top and a durable matte finish area for marking, promotes even heat distribution, resistant to chemical, mechanical and thermal shock, borosilicate glass, Capacity: 500ml, Height: 170mm, Base diameter: 104mm, neck Diameter: 35mm, Stopper size:#6.5	2500	37,500.00	
8	15	unit	Graduated measuring cylinder, tall form with spouted neck, with printed graduations. Material: Borosilicate glass (clear). ISO 4788:2005 compliant. Nominal capacity: 100mL. Overall maximum height: 260mm. Minimum distance from the top of scale to top of cylinder: 35mm. Minimum internal height to highest graduation line: 145mm. Subdivisions: 1 mL. Maximum capacity at lowest graduation line: 10 mL. Maximum permissible error: ± 0.5 mL. Stability: does not topple when placed empty on an inclined surface at an angle of 15° to the horizontal.	750	11,250.00	
9	15	unit	Graduated measuring cylinder, tall form with spouted neck, with printed graduations. Material: Borosilicate glass (clear). ISO 4788:2005 compliant. Nominal capacity: 250mL. Overall maximum height: 335mm. Minimum distance from the top of scale to top of cylinder: 40mm. Minimum internal height to highest graduation line: 200mm. Subdivisions: 2 mL. Maximum capacity at lowest graduation line: 26 mL. Maximum permissible error: ± 1 mL. Stability: does not topple when placed empty on an inclined surface at an angle of 15° to the horizontal.	1000	15,000.00	

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT COST	TOTAL COST	END USER
10	15	unit	Graduated measuring cylinder, tall form with spouted neck, with printed graduations. Material: Borosilicate glass (clear). ISO 4788:2005 compliant. Nominal capacity: 1000mL. Overall maximum height: 470mm. Minimum distance from the top of scale to top of cylinder: 50mm. Minimum internal height to highest graduation line: 310mm. Subdivisions: 10mL. Maximum capacity at lowest graduation line: 100 mL. Maximum permissible error: ±5mL. Stability: does not topple when placed empty on an inclined surface at an angle of 15° to the horizontal.	3700	55,500.00	COM
11	10	unit	Dropper assembly with screw cap, dropper bulb (DBS type - dropper bulb with small suction volume), and pipette. Material (bottle): Borosilicate glass (clear) Compliant with ISO 11418-5:1997(E). Nominal volume of screw neck bottle: 50mL. Length of pipette (±0.5mm): 83mm. Volume and/or dimension of dropper bulb, screw cap, and pipette: refer to attached ISO 11418-5:1997(E) pages 3-6.	1950	19,500.00	
12	10	unit	Dropper assembly with screw cap, dropper bulb (DBS type - dropper bulb with small suction volume), and pipette. Material (bottle): Borosilicate glass (clear) Compliant with ISO 11418-5:1997(E). Nominal volume of screw neck bottle: 75mL. Length of pipette (±0.5mm): 87.5mm. Volume and/or dimension of dropper bulb, screw cap, and pipette: refer to attached ISO 11418-5:1997(E) pages 3-6.	2100	21,000.00	
13	10	unit	Dropper assembly with screw cap, dropper bulb (DBM type - dropper bulb with medium suction volume), and pipette. Material (bottle): Borosilicate glass (clear) Compliant with ISO 11418-5:1997(E). Nominal volume of screw neck bottle: 100mL. Length of pipette (±0.5mm): 94mm. Volume and/or dimension of dropper bulb, screw cap, and pipette: refer to attached ISO 11418-5:1997(E) pages 3-6.	1800	18,000.00	
14	10	unit	Dropper assembly with screw cap, dropper bulb (DBM type - dropper bulb with medium suction volume), and pipette. Material (bottle): Borosilicate glass (amber) Compliant with ISO 4796-2. Nominal volume of screw neck bottle: 250mL. With integral ground glass cone on pipette to fit bottle neck. Joint size (mm): 19/26.	2025	20,250.00	
15	10	unit	Reagent bottle, conical neck, either type NS (narrow-necked with a conical socket) or NJ (narrow-necked with an interchangeable conical ground joint), with glass or plastic stopper. Material: Borosilicate glass (clear). Compliant with ISO 4796-2:2000(E). Nominal capacity: 500mL. Total height approx.: 162mm. Outside diameter approx.: 86mm. Wall thickness: at least 1.3mm. Socket/ground joint: 24/29. Stopper: appropriate fit, grip, and shape.	1750	17,500.00	
16	10	unit	Reagent bottle, conical neck, either type NS (narrow-necked with a conical socket) or NJ (narrow-necked with an interchangeable conical ground joint), with glass or plastic stopper. Material: Borosilicate glass (clear). Compliant with ISO 4796-2:2000(E). Nominal capacity: 1000mL. Total height approx.: 198mm. Outside diameter approx.: 107mm. Wall thickness: at least 1.7mm. Socket/ground joint: 29/32. Stopper: appropriate fit, grip, and shape.	2250	22,500.00	
17	10	unit	Reagent bottle, conical neck, either type WS (wide-necked with a conical socket) or WJ (wide-necked with an interchangeable conical ground joint), with glass or plastic stopper. Material: Borosilicate glass (amber). Compliant with ISO 4796-2:2000(E). Nominal capacity: 500mL. Total height approx.: 162mm. Outside diameter approx.: 86mm. Wall thickness: at least 1.3mm. Socket/ground joint: 45/50. Stopper: appropriate fit, grip, and shape.	2300	23,000.00	
18	10	unit	Reagent bottle, conical neck, either type WS (wide-necked with a conical socket) or WJ (wide-necked with an interchangeable conical ground joint), with glass or plastic stopper. Material: Borosilicate glass (amber). Compliant with ISO 4796-2:2000(E). Nominal capacity: 1000mL. Total height approx.: 198mm. Outside diameter approx.: 107mm. Wall thickness: at least 1.7mm. Socket/ground joint: 60/46. Stopper: appropriate fit, grip, and shape.	2600	26,000.00	
19	60	unit	Petri dish with cover, made up of borosilicate glass, Autoclavable, 15mm deep x100 mm OD, Borosilicate glass petri dishes will remain clear after repeated wet or dry sterilization. The tops and bottoms are marked with different colored enamels for quick identification	520	31,200.00	
20	1000	unit	Glass slides - a thin flat piece of glass, typically 76 x 26 mm (3 by 1 inches and about 1mm thick, used to hold objects for examination.	190	190,000.00	
21	1000	unit	Slide cover/ cover slip - Thickness: 0.17mm, size: 22x22mm, Material: Clear Microscopy optical grade glass, Clean polished free from nicks, scratches and fibres. Weight: 0.26kg, Volume: 4.00dm ³ .	70	70,000.00	

ITEM	QTY	UNIT	ITEM DESCRIPTION	UNIT COST	TOTAL COST	END USER
22	200	unit	Test tube, Type I (borosilicate glass). Compliant with ISO 4142:2002(E), ISO 3585, and ISO 4803. Nominal size: 12mm x 100mm. Length (± 2 mm): 100mm. External diameter (± 0.2 mm): 12mm. Wall thickness (± 0.4 mm): 1.0mm to 1.5mm.	65.2	13,040.00	
23	200	unit	Test tube, Type I (borosilicate glass). Compliant with ISO 4142:2002(E), ISO 3585, and ISO 4803. Nominal size: 13mm x 100mm. Length (± 2 mm): 100mm. External diameter (± 0.2 mm): 13mm. Wall thickness (± 0.4 mm): 1.0mm to 1.5mm.	35	7,000.00	
24	200	unit	Test tube, Type I (borosilicate glass). Compliant with ISO 4142:2002(E), ISO 3585, and ISO 4803. Nominal size: 16mm x 100mm. Length (± 2 mm): 100mm. External diameter (± 0.2 mm): 16mm. Wall thickness (± 0.5 mm): 1.2mm	45	9,000.00	
25	15	unit	Burette, Class A (either Class A or AS subdivision), with printed graduations. Material: Borosilicate glass. ISO 385:2005(E) compliant. Nominal capacity: 10mL. Subdivision: 0.02mL. Maximum permissible error: ± 0.02 mL. Scale length: 480mm minimum to 600mm maximum. Overall maximum length: 820mm. Distance of zero line from top of burette: ≥ 50 mm. Distance of lowest graduation line from top of stopcock: ≥ 50 mm. Length of tube of uniform bore below lowest graduation line: ≥ 20 mm. Distance of end of jet from underside of stopcock: ≥ 50 mm. Stopcock: either glass or suitable materials (e.g. ceramics or plastics) should allow smooth and precise control of outflow and prevent a rate of leakage greater than one scale subdivision.	3500	52,500.00	
26	15	unit	Burette, Class A (either Class A or AS subdivision), with printed graduations. Material: Borosilicate glass. ISO 385:2005(E) compliant. Nominal capacity: 25mL. Subdivision: 0.05mL. Maximum permissible error: ± 0.03 mL. Scale length: 480mm minimum to 600mm maximum. Overall maximum length: 820mm. Distance of zero line from top of burette: ≥ 50 mm. Distance of lowest graduation line from top of stopcock: ≥ 50 mm. Length of tube of uniform bore below lowest graduation line: ≥ 20 mm. Distance of end of jet from underside of stopcock: ≥ 50 mm. Stopcock: either glass or suitable materials (e.g. ceramics or plastics) should allow smooth and precise control of outflow and prevent a rate of leakage greater than one scale subdivision.	4500	67,500.00	
27	15	unit	Burette, Class A (either Class A or AS subdivision), with printed graduations. Material: Borosilicate glass. ISO 385:2005(E) compliant. Nominal capacity: 50mL. Subdivision: 0.10mL. Maximum permissible error: ± 0.05 mL. Scale length: 500mm minimum to 600mm maximum. Overall maximum length: 820mm. Distance of zero line from top of burette: ≥ 50 mm. Distance of lowest graduation line from top of stopcock: ≥ 50 mm. Length of tube of uniform bore below lowest graduation line: ≥ 20 mm. Distance of end of jet from underside of stopcock: ≥ 50 mm. Stopcock: either glass or suitable materials (e.g. ceramics or plastics) should allow smooth and precise control of outflow and prevent a rate of leakage greater than one scale subdivision.	6000	90,000.00	
			TOTAL		885,190.00	