

PETROCHEMICAL



Designed from ASTM specifications, petrochemical glassware from Kimble[®] is intended for use with standard ASTM test methods. Petrochemical apparatus includes distillation flasks, centrifuge tubes, and glassware unique for testing petroleum products.

s precision glassware solutions prec

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BEVEL-SEAL™ Inlet Adapter

For use with plain thermometers, pipets, syringes or other small items with an OD from 2 to 17 mm.

- A vacuum-tight seal is created with the open top compression cap and FKM o-ring to allow adjustable immersion of thermometers
- Cap is suitable for use to 150 °C
- To use it as a septum port, just replace the o-ring with a PTFE-lined septum
- Ref: ASTM Method D1744
- Supplied with one FKM o-ring and one 410119 cap
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Accommodation Range (mm)	Modified GPI Thread	Case Qty	7
KT179700-1424	11-14	22-415	1	\$24.0
KT179700-0529	2-5	13-415	1	
KT179700-2129	5.5-6.5	13-425	1	
10000-500	14-17	28-415	1	

Low Form Griffin Beakers

KIMAX® beakers offer excellent mechanical strength and durability, while providing high resistance to chemical attack and thermal shock. They have been a staple in research laboratories for many generations.

- Thick, slightly flared, beaded top, with a spout designed to have excellent pouring characteristics
- Improved mechanical and thermal properties result from the uniform sidewall and bottom thickness design
- All sizes have a durable matte finish marking area for use with an ordinary pencil
- Easy-to-read white graduated scale is provided on all sizes from 20 to 4000 mL for measuring and/or mixing liquids
- Ref: ASTM Method D2070
- Design meets ASTM Specification E960, Type I requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Graduation	Case
Cat. No.	(mL)	Range (mL)	Qty
89001-054	10		48
89001-056	20	5 to 15	48
89000-742	30	5 to 25	48
89002-748	50	20 to 40	48
89001-058	100	20 to 80	48
89001-060	150	20 to 140	48
89001-062	250	25 to 200	48
89001-064	400	50 to 325	48
89001-066	600	50 to 500	36
89001-068	800	50 to 750	24
89000-744	1000	100 to 1000	24
89001-070	1500	200 to 1400	16
89000-746	2000	200 to 2000	16
89001-072	4000	500 to 3500	16



Low Form Heavy Duty Beakers

KIMAX® heavy duty beakers offer superior mechanical strength and durability. They also offer improved safety when used under extreme conditions such as mechanized washing and rough handling.

- Thick uniform walls throughout and extra wall thickness built into the evenly tooled top rim
- Uniformity of construction allows for use on hot plates
- All sizes have a durable matte finish marking area and a white graduated scale
- Design meets ASTM Specification E960, Type II requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Graduation	Case	
Cat. No.	(mL)	Range (mL)	Qty	
89001-074	250	25 to 200	48	· ± 1000
89001-076	400	25 to 325	48	1000 mL
89001-078	600	50 to 500	36	KIMAX" # 700
89001-081	1000	100 to 1000	24	
89001-082	2000	200 to 1800	8	
89001-084	4000	500 to 3500	4	

Tall Form Berzelius Beakers

KIMAX® Berzelius beakers offer excellent mechanical strength and durability, while providing high resistance to chemical attack and thermal shock. Ideal for use when performing titrations.

- All sizes have a durable matte finish area for marking with an ordinary pencil
- Easy-to-read white double capacity scales to indicate approximate volumes
- Design for 14020 series meets ASTM Specification E960, Type IV requirements and does not include a spout
- Design for 14030 series meets ASTM Specification E960, Type III requirements and includes a spout
- Ref: ASTM Method D94
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity	Graduation	Case	
Gal. NO.	(IIIL)	Range (IIIL)	Qty	
13920-012	100	20 to 80	12	
13920-034	200	25 to 150	12	
13920-057	300	25 to 250	12	~
13920-078	400	25 to 325	6	
89000-698	600	50 to 500	6	
13920-137	1000	50 to 950	6	
89000-748	100	20 to 80	48	
89001-086	200	25 to 150	48	
89001-088	300	25 to 250	48	
89001-090	400	25 to 325	36	
89000-750	600	50 to 500	24	
89000-752	1000	50 to 950	18	

Unsaturation Gasoline Bottles

KIMAX® bottle used in the determination of unsaturated hydrocarbons in gasoline.

 Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

The body of the bottle (*approximately 45 mL capacity*) is a "reaction vessel" in which an accurately measured sample is pipetted into the bottle; excess reagent is then added. After the reaction is complete, more reagent is added to raise the "fat column" into the calibrated neck of the bottle, where results are read directly as a percentage of fat in the sample.

VWR	Neck Capacity		Case
Cat. No.	(%)	Tolerance (%)	Qty
21140-008	100 (10 mL)	± 1	12

Heavy Duty Carboy

The heavy duty construction of these bottles is designed to prolong life expectancy with harder than normal usage. Ideal for storage and dispensing of solutions.

- KIMAX® carboy-style bottle with sloping shoulders
- Neck is tooled for a uniform fit with a #12 rubber stopper
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Capacity (gallons)	Case Qty	A
89003-472	9500	2.5	1	
89001-550	13200	3.5	1	
89001-548	45500	12.0	1	
89001-552	19000	5.0	1	

Reservoir Bottle with Bottom Hose Outlet

Designed to store and discharge liquids via a bottom hose outlet.

- Glass hose connection outlet is fused to the bottle
- All sizes accept 5/16" ID flexible tubing
- With white enamel marking spot
- Ref: ASTM Method D1744
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Fits Tubing ID (inches)	Case Qty	
89001-536	250	5/16	6	
89001-538	500	5/16	1	
89001-528	1000	5/16	1	10.1440 ²
89001-532	2000	5/16	1	
89001-540	5000	5/16	1	Cert

Solution Bottle with Color-Coded PTFE Flathead Stopper

These KIMAX® bottles are designed for storage and dispensing of solutions.

- Bottle necks are Standard Taper ground to accept flathead colorcoded PTFE stoppers
- Replacement stoppers are Cat. No. 41941R.
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Standard Taper Stopper Size	Case Qty	X
89001-576	100	14	1	
89001-582	250	19	6	
89001-584	500	24	6	
89001-578	1000	29	6	
89001-580	2000	29	4	

GL 45 Media Bottles

Ideal for general laboratory use including mixing, storing or transporting culture media, chemicals or solvents.

- Enhanced graduations and marking spot made with chemically resistant white enamel paint
- 30 mm ID opening
- Autoclavable
- Supplied without caps or with linerless GL 45 screw thread caps
- Replaceable clear (natural) drip-free polypropylene pour ring is included on each bottle
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirement

VWR	Capacity	Graduation	Case	
Cat. No.	(mL)	Range (mL)	Qty	5 · 10
89000-926	100	20-80	10	
89000-928	250	50-200	10	1
89000-930	500	100-400	10	
89000-932	1000	100-900	10	
89000-934	2000	400-1800	4	Store in a
89000-936	5000	1000-4000	1	
89000-938	10000	2000-8000	1	

RAY-SORB® GL 45 Media Bottles

Designed to protect contents from UV rays; ideal for light-sensitive products

- Enhanced graduations and marking spot made with chemically resistant white enamel paint
- 30 mm ID opening
- Linerless GL 45 screw thread cap
- Autoclavable
- Replaceable clear (natural) drip-free polypropylene pour ring is included on each bottle
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements and then RAY-SORB® processed

VWR Cat. No.	Capacity (mL)	Graduation Range (mL)	Case Qty	
89230-852	100	20-80	1	
89230-854	250	50-200	1	
89000-964	500	100-400	1	C
89000-966	1000	100-900	1	250 KM
46000-180	2000	400-1800	1	
46000-182	5000	1000-4000	1	2
46000-184	10000	2000-8000	1	



Static Dilution Bottles

The static dilution bottle provides a simple, inexpensive means to prepare, store and use standards of volatile organic compounds.

- Standards are prepared by injecting a small quantity of the pure compounds into the bottle and using heat to fully evaporate.
- A push-pull, color-coded, (green-for-open, red-for-closed) Mininert valve is supplied for easy use and long lasting performance
- The valve is excellent for sealed tube reactions, long term storage of standards or periodic addition of reactants
- Sample aliquots are withdrawn using a gas-tight syringe
- Septum seal prevents leakage when using a syringe
- Standards prepared by this method are stable for up to one week
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Valve	Case	KONTER
Cat. No.	(mL)	Thread	Qty	
KT591190-2000	2000	24-410	1	

Sample Containers

This sample container is for use in the determination of the stability of gasoline under accelerated oxidation conditions.

- The cover is intended to prevent material that is refluxing back into the bomb stem from contaminating the sample
- Ref: ASTM D525
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

DIC	-		
nd	1000		
e			
,	1.5	30	100
	6	5/6	Real Property lies

VWR	Overall Height	Width	Case
Cat. No.	(mm)	(mm)	Qty
KT896670-0000	110	50	1

Cold Test Jar

KIMAX® jar used to determine the temperature (cloud point) at which haziness is first observed at the bottom of the jar when petroleum oils are cooled and examined under specified conditions (ASTM D2500), and also the temperature at which chilled undisturbed oils will pour (ASTM D97).

- Jar has a flat bottom and a reinforced bead at the open end
- With a marking spot and a graduation ring located 54 mm from the inside bottom
- Ref: ASTM Method D97, D2500
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Height	OD	Case
Cat. No.	(mm)	(mm)	Qty
89002-138	125	35	36

Class A Burets, Serialized and Certified, Straight Bore PTFE Stopcock, with Dust Cap

KIMAX® precision bore buret is permanently marked with an individual serial number. Supplied with a Certificate of Graduation Accuracy. Designed from ASTM Specification E287, Class A requirements. KIM-KAP® dust cap is included.

Delivery stem of the 10 mL size is 115 mm long to meet requirements of potentiometric titration burets (ASTM D664). PTFE plug for all sizes is 2. Scale is a durable white ceramic enamel. Replacement stopcock is 821001-0002.

VWR Cat. No.	Capacity	Tolerance	Case	
89001-618	10	+0.02	1 1	
89001-622	25	±0.03	1	
89001-624	50	±0.05	1	
89001-620	100	±0.10	1	

Class A Serialized and Certified Automatic Zero Burets with PTFE Stopcock and Reservoir Bottle

 $KIMAX^{\circ}$ precision bore automatic burets are used in applications requiring the highest degree of precision and accuracy for volumetric analysis. These are ideal for repeat titrations requiring traceable volumetric accuracy or when the titrant should not be handled.

- Packed complete with a reservoir bottle, U-shaped drying tube, vented connecting tube, rubber squeeze bulb, # 1 single-holed rubber stopper, PTFE stopcock plug and 1/4 inch ID rubber tubing
- Precision ground tips assure uniform outflow
- Supplied with a chemically-resistant, self-lubricating PTFE stopcock plug
- Permanently marked with an individual serial number and traceable to NIST Standards
- Supplied with a Certificate of Graduation Accuracy
- Easy-to-read durable black enamel scale
- Replacement 2 mm bore size stopcock plug is 823001-0002.
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and

ASTM E438, Type I, Class A requirements

VWR Cat. No.	Buret Capacity (mL)	Tolerance (mL)	Case Qty
17578-027	10	±0.02	1
17578-049	25	±0.03	1
17578-060	50	±0.05	1
17578-082	100	±0.10	1

Procedure for Using Automatic Buret 17124F: Place the one-holed rubber stopper, large end first, on the lower tubulation of the buret. Add the U-shaped drying tube, prefilled with drying medium, over the small end of the stopper. Join the drying tube to the connecting tube and then the rubber squeeze bulb with the rubber tubing. To fill the buret, turn the stopcock to connect, filling tube to the buret. Squeeze the rubber bulb several times while closing the vent hole in the connecting tube with your finger. As liquid rises and overflows from the tip above the buret, turn the stopcock to off and remove your finger from the vent hole of the connecting tube. If air is trapped in the stopcock or tip, discharge the air and repeat the filling operation to automatic zero at overflow tip.

Class A Serialized and Certified Reservoir Fill Burets with Three-Way Stopcock

Used for general purpose titrations requiring traceable volumetric accuracy.

- Permanently marked with an individual serial number and traceable to NIST Standards
- Supplied with a Certificate of Graduation Accuracy
- Filling tube accepts 1/4 inch ID flexible tubing
- Precision ground tips assure uniform outflow
- KIM-KAP® dust cap is included
- Filled through a self-lubricating PTFE stopcock plug
- Easy-to-read durable white enamel scale
- Reservoir fill style buret
- Replacement 2 mm bore size three-way stopcock is 823001-0002.
- Designed from ASTM E287, Class A requirements
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable
 borosilicate glass conforming to USP Type I and ASTM

E-438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty	
17527-081	25	±0.03	1	
17527-106	50	±0.05	1	
17527-128	100	±0.10	1	

Class B Automatic Burets

Used in general purpose volumetric analysis and for repeated titrations where Class B tolerances are appropriate.

- Both the filling and overflow tubes accept 1/4 inch ID flexible tubing
- Filled through a self-lubricating, chemically-resistant PTFE stopcock plug
- Easy-to-read durable black ceramic enamel scale
- Replacement stopcock is 823001-0002.
- Designed from ASTM Specification E287, Class B
 requirements
- Ref: ASTM Method D1744
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty	
17550-061	10	±0.04	1	
17550-083	25	±0.06	1	(bo in
17550-108	50	±0.10	1	
17550-120	100	±0.20	1]

Class B Straight Bore Burets with PTFE Stopcock

Used in general purpose volumetric analysis and titrations where Class B tolerances are appropriate.

- Funnel fill style buret
- Replacement 2 mm straight bore PTFE stopcock plug is 821001-0002.
- Easy-to-read durable black ceramic enamel scale
- Designed from ASTM Specification E287, Class B requirements
- Ref: ASTM Method D974
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty
89001-608	10	±0.04	1
89001-612	25	±0.06	1
89001-614	50	±0.10	1
89001-610	100	±0.20	1

Automatic Burets

KIMAX® buret ideal for repeat titrations requiring traceable volumetric accuracy.

- Supplied with a Certificate of Graduation Accuracy
- Precision ground tips assure uniform outflow
- Permanently marked with an individual serial number and traceable to NIST standards

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- Self-zeroing
- Filled through a self-lubricating PTFE stopcock plug
- Filling tube and overflow tube at the top of the buret accept 1/4 inch ID flex ble tubing
- Easy-to-read durable black enamel scale
- Replacement 2 mm bore size three-way stopcock is 823001-0002.
- Designed from ASTM E287, Class A requirements
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

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VWR	Capacity	Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
17456-182	10	±0.02	1	TWW
89001-634	25	±0.03	1	10
89001-636	50	±0.05	1	
17456-188	100	±0.10	1	l V



Micro Buret with Side Reservoir

Used for small volume titrations.

- Side reservoir capacity is approximately 70 mL
- Easy-to-read durable white ceramic enamel scale
- Replacement 2 mm straight bore stopcock plug is 821001-0002, and replacement stopper is medium length 14/20 standard taper glass stopper
- Supplied with two chemically-resistant, self-lubricating
 PTFE stopcock plugs
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
17555-021	2	±0.01	1	
17555-043	5	±0.01	1	
17555-065	10	±0.02	1	

Serialized and Certified Funnel Top Micro Buret with Straight Bore PTFE Stopcock

Used for small volume titrations requiring traceable volumetric accuracy.

- Precision bore buret is permanently marked with an individual serial number and is traceable to NIST standards
- Supplied with a Certificate of Graduation Accuracy
- Easy-to-read durable white ceramic enamel scale
- Funnel top accepts a one-hole #3 rubber stopper
- Replacement 2 mm straight bore stopcock plug is 821001-0002.
- Supplied with a chemically-resistant, self-lubricating
 PTFE stopcock plug
- Manufactured to the specifications found in ASTM E694
- Calibrated to the accuracy requirements found in ASTM Specification E542
- Ref: ASTM Method D974
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements



A short length of glass tubing aids in filling the buret through the tip by vacuum if desired. Stopper and tubing are not supplied.

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty
89001-646	5	±0.01	1
89001-644	10	±0.02	1

Dispensing Burets

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Large capacity KIMAX[®] burets used for dispensing laboratory solvents or solutions for a variety of clinical and industrial applications.

- Supplied with a chemically-resistant, self-lubricating PTFE stopcock
- Easy-to-read durable white ceramic enamel scale
- Replacement 4 mm straight bore stopcock plug is 821001-0004.
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
89001-640	250	±2.0	2	
89001-642	500	±2.5	2	
89001-638	1000	±5.0	2	

Tutwiler Gas Burets

This buret is designed for use with high sulfur content gas streams.

- Large ID connections reduce clogging when sulfur precipitates out and deposits on the inside of connectors
- Supplied with a size 4 glass stopcock in the bottom, a size 2 stopcock in the top and a size 13 glass pennyhead stopper
- Designed for use with method UOP 9-85
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance:	Case	
Cat. No.	(mL)	Buret (mL)	Qty	
32226-012	100	±0.2	1	

Neutral Oil and Loss Columns

Apparatus for the determination of total neutral oil of natural fats and oils consisting of triglycerides and unsaponifiable matter.

- Unique design of the flask allows the transfer of the weighed sample directly onto the column
- Supplied complete, as shown
- Stopcocks have PTFE plugs, and the column has a 40-60 micron porosity fritted disc
- Joints are Standard Taper 19/22 except for the extension tube, which is Standard Taper 7/25
- Ref: OACS Official Method Ca9f-57, JAOCS Vol. 46, No. 5, Pages 252-255
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

Free fatty acids and miscellaneous non-fat substances are removed by passing the sample through a column of activated alumina. Losses are then calculated.

VWR	Solvent Reservoir	Porosity	Case
Cat. No.	Capacity (mL)	(microns)	Qty
10000-698	175	40-60	1



VWR

Cat. No.

KT456250-0021

KT456250-0022

KT456250-0023

Friedrich Condenser with Hose Connection Sidearm

Friedrich condenser used primarily in reflux mode and Soxhlet extractions.

- Water inlet and outlet located above ring-sealed inner condensing tube
- Standard Taper inner drip joint and side outlet for drying tube, etc
- Molded inner spiral provides surface area for the condensation of the product
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

Length (mm)

190

190

190



Case

Qty

1

Friedrich Condenser with Standard Taper Sidearm

Cold Finger Standard Taper

Joints

34/45

45/50

55/50

Friedrich condenser specially designed to provide a long vapor path, good heat transfer and anti-flooding characteristics.

- Molded inner spiral provides surface area for the condensation of the product
- Inclined Standard Taper outer joint on the side
- Water inlet and outlet located above ring-sealed inner condensing tube
- Standard Taper inner drip joint at the bottom
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Jacket Length	Standard Taper	Case	1º
Cat. No.	(mm) -	Joints	Qty	C
KT437000-2440	225	24/40	1	
10000-504	225	29/42	1	

Coil-Type Reflux Condenser with Two Upper Hose Barbs

Tightly wound coil provides enough surface area to condense high vapor pressure solvents like hexane.

- With an internal, coil-type cold finger
- Standard Taper outer joint at the top, Standard Taper inner drip joint at the bottom
- Two hose connectors at the top for water inlet and outlet
- Ref: ASTM Method D94, D95
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Approx. Condensing Area (cm²)	Case Qty	
10000-506	94	1	
KT457000-0125	115	1	
KT457000-0175	170	1	
KT457000-0225	229	1	

Allihn Condensers with Full Length Joints

Used in many refluxing operations.

- Standard Taper drip joint at bottom and a Standard Taper outer joint at top
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Overall Height (mm)	Standard Taper Joints	Case Qty	
KT431000-2420	370	24/40	1	
KT431000-2425	425	24/40	1	
KT431000-2430	470	24/40	1	
KT431000-2440	570	24/40	1	
10000-502	380	29/42	1	
KT431000-2930	480	29/42	1	

Graham Condensers

Vapor travels through a coil extending through the length of the condenser and is surrounded by a cooling jacket.

- Standard Taper outer joint at top
- Standard Taper inner drip joint at the bottom
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Jacket Length (mm)	Standard Taper Joints	Case Qty
KT439000-2420	200	24/40	1
KT439000-2425	250	24/40	1
KT439000-2430	300	24/40	1
KT439000-2440	400	24/40	1

Liebig Condenser with Standard Taper Joints

- Standard Taper outer joint at the top
- Standard Taper inner drip joint at the bottom
- Hose connections accept 3/8" ID flexible tubing
- Ref: ASTM Method D322

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 Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Jacket Length (mm)	Standard Taper Joints	Case Qty		
KT447000-2410	100	24/40	1		
KT447000-2420	200	24/40	1		
KT447000-2425	250	24/40	1	1	44
KT447000-2430	300	24/40	1		
KT447000-2440	400	24/40	1		
KT447000-2920	200	29/42	1		

West Condenser with Full Length 24/40 Joints

The narrow annular space of the West design provides high cooling efficiency due to the increased flow rate of the cooling medium.

- Full length 24/40 joints
- Standard Taper outer joint at the top and Standard Taper inner drip joint at the bottom
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Jacket Length (mm)	Standard Taper Joints	Case Qty
KT452000-2410	100	24/40	1
KT452000-2420	200	24/40	1
KT452000-2430	300	24/40	1

Class A Measuring Cylinders

- Letters "TC" on cylinder indicate to contain
- Pour spout
- SAFE-GARD® bumper is supplied
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Intervals (mL)	Tolerance (mL)	Case Qty	
89217-664	10	0.1	±0.80	6	100
89217-666	25	0.2	±0.14	6	
89217-668	50	1	±0.2	6	- 11
89217-670	100	1	±0.35	6	6) 52
89217-672	250	2	±0.65	4	-tr
89217-674	500	5	±1.10	4	27
89217-676	1000	10	±2.00	1	1
89217-678	2000	20	±6.00	1	0-

Class A Cylinders with Reverse Graduations

KIMAX® Class A cylinder is marked with a reverse metric scale.

- "TD" appears on each cylinder and indicates the cylinder is calibrated to deliver
- SAFE-GARD® bumpers are supplied with sizes 25mL through 2000 mL
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Range (mL)	Tolerance (mL)	Case Qty
89001-682	10	1 to 10	±0.09	6
89001-690	25	2 to 25	±0.17	6
89001-694	50	3 to 50	±0.25	6
89001-684	100	5 to 100	±0.40	6
89001-692	250	10 to 250	±0.80	4
89001-696	500	25 to 500	±1.30	4
89001-686	1000	50 to 1000	±2.50	1
89001-688	2000	100 to 2000	±6.00	1

Class B Cylinders with Pour Spout

The primary function of this TC cylinder is to receive liquids where volumetric calculations are based solely on the volume contained within the cylinder.

- Among other applications, TC cylinders are frequently used as receivers for the condensate from distillation procedures and sedimentation values of precipitates
- "TC" appears on each cylinder and indicates the cylinder is calibrated to contain
- 10 mL size has an enlarged funnel top for ease of filling
- Ref: ASTM Method D86, D892
- Provided with a hexagonal base flat ground for stability and a SAFE-GARD® bumper on sizes 25 mL and larger
- Designed from ASTM E1272, Style I, Class B requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Range (mL)	Tolerance (mL)	Case Qty
89001-094	10	1 to 10	±0.1	12
89001-096	25	3 to 25	±0.3	1
89001-098	50	3 to 50	±0.4	12
89001-100	100	5 to 100	±0.6	12
89001-102	250	10 to 250	±1.4	6
89001-104	500	25 to 500	±2.6	4
89001-106	1000	50 to 1000	±5.0	4
89001-108	2000	100 to 2000	±10.0	2

Class B Cylinders with Single Metric Scale and Red Stripe

- "TD" appears on each cylinder and indicates the cylinder is calibrated to deliver
- SAFE-GARD® bumpers are supplied with sizes 25 through 2000 mL
- The 10 mL size has an enlarged funnel-shaped top for ease of filling
- Designed from ASTM Specification E1272, Style I, Class B requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No	Capacity	Graduation	Tolerance	Case
89001-126	10	1 to 10	±0.1	24
89001-128	25	2 to 25	±0.3	24
89001-130	50	3 to 50	±0.4	24
89001-132	100	5 to 100	±0.6	24
89001-134	250	10 to 250	±1.4	12
89001-136	500	25 to 500	±2.6	8
89001-138	1000	50 to 1000	±5.0	4
89001-140	2000	100 to 2000	±10.0	4

Class B Cylinders for Emulsion Test

KIMAX® cylinder used in the determination of emulsifying and demulsifying tendencies of lubricating oils (ASTM D1401).

- "TC" appears on each cylinder and indicates the cylinder is calibrated to contain
- Round base to fit baths in which this cylinder is generally used
- Pour spout
- Ref: ASTM Method D1401
- Scale is durable white ceramic enamel
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case
Cat. No.	(mL)	(mL)	Qty
89001-092	100	±1.0	1

Class B Cylinders with Single Metric Scale and Glass Stopper

The 250 mL size may be used to determine unsaponified matter in soaps and soap products (ASTM D460), and anhydrous salt free soda soap and fatty matter in soaps containing synthetic detergents (ASTM D820). The 500 mL size may be used in settlement tests of emulsified asphalts (ASTM D244).

- KIMAX® cylinder with durable white ceramic enamel scale
- Letters "TC" on cylinder indicate to contain
- The 10 and 25 mL sizes are comparatively short to provide increased stability
- Standard Taper glass stopper is supplied
- Heights given below do not include the stopper
- Replacement stopper is 850100
- Designed from ASTM Specification E1272, Style II, Class B requirements
- Ref: ASTM Methods D244, D1094
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No	Capacity	Tolerance	Case	
89001-206	50	±0.4	24	
89001-208	100	±0.6	24	
89001-210	250	±1.4	8	
89000-762	500	±2.6	6	
89001-212	1000	±5.0	4	
89000-764	2000	±10.0	2	

Hydrometer Cylinders with Pour Spout

- KIMAX® plain, ungraduated cylinder with a hexagonal base flat ground for stability
- Approximate wall thickness is 1.5 mm
- Ref: ASTM Method D287, D1298
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I,
 Class A requirements

Class A requirements	
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VWR Cat. No.	Capacity (mL)	Diameter (mm)	Case Qty
89000-972	175	38	1
89001-232	340	38	1
89001-234	600	50	1
89001-236	1200	63	1

Dean Stark Distillation Receivers

Ideally suited for the determination of water content in organic solvents.

- Dean Stark design for solvents that are classified as either heavier than water or lighter than water
- Unit is compact in both the Standard Taper 24/40 and Standard Taper 14/20 sizes
- Lower three-way stopcock provides a sample port, and the apparatus can be drained without disassembly
- Trap area is positioned well above the boiling flask
- Thermometer joint is Standard Taper 10/30. Stopcock plug is 822501-0002
- Ref: Design suggested by Dr. A. J. East, Celanese Corp
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

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VWR	Capacity	Graduation Intervals	Case
Cat. No.	(mL)	(mL)	Qty
KT535801-0000	20	0-3 in 0.2, 3-20 in 0.5	1

Modified Dean Stark Distillation Receiver

- KIMAX® distilling receiver with full length Standard Taper 24/40 joints and a siphon return arm
- Ref: ASTM Method D95
- Sidearm bridge equalizes pressure
- Designed from ASTM Specification E123, Style A
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty	
89001-750	10	±0.05 (1st set of sub- divisions), ±0.1 (2nd set of subdivisions)	1	V

Bidwell-Sterling Moisture Test Distillation Receiver

Bidwell-Sterling designed for the determination of moisture in foods and organics.

- Made to ASTM specifications E123
- Also conforms to many methods of the American Oil Chemists Society
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Subdivision (mL)	Case Qty
10000-498	5	0.1	1
10000-508	5	0.05	1

General Distillation Apparatus

KIMAX® apparatus used in general purpose distillation and phenol distillation.

- Flask has a flat bottom and a distillation head with a 19/38 joint
- Supplied with a Standard Taper stopper
- Condenser is Graham-style, having a 200 mm jacket with a 19/38 joint at the top only
- For method, reference APHA Examination of Water and Wastewater: Method 4500-NH3 nitrogen (ammonia) in purified drinking water, natural water, and highly purified wastewaters (concentration < 20 µg/L)
- Method calls for use with tall form 50 mL Nessler Tubes (45315A & B-50)
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

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VWR	Capacity	Case		
Cat. No.	(mL)	Qty		
89001-740	500	1		-
89001-738	1000	1		

Engler Distilling Flasks

KIMAX® distilling flask.

- Sidearm tube is sealed at an angle of 75° from the neck and is 137 ± 3 mm from the bottom of the flask
- Designed from ASTM Specification E133 and intended for use in ASTM D86, D233, D801, and D802
- Ref: ASTM Method D86
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Arm OD	Case	-
Cat. No.	(mL)	(mm)	Qty	
93001-126	125	7	24	

Engler Distilling Flasks with Three Reference Lines

For use with Haage automatic distillation apparatus or others that call for three thermometer depth insertions.

- Sidearm tube is sealed at an angle of 75° from the neck and is 137 ± 3 mm from the bottom of the flask three reference lines
- Ref: ASTM D86
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

			1
VWR	Capacity	Arm OD	Case
Cat. No.	(mL)	(mm)	Qty
89001-788	125	7	24

Barrett Distilling Flasks

- Barrett flasks made to ASTM E133 specifications
- These flasks feature smooth, consistent, heavy walls for uniform heating and minimal breakage
- Supplied with one cork for the sidearm
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Туре	Case Qty	
KT610910-0125	125	Engler	12	
KT610900-0200	200	Barrett	24	

Thermometer Centering Device

Designed for 6.5 mm OD manual thermometer or 1/4" temperature sensor probe as used on standard Automated Distillation Apparatus with VWR 93001-126 flasks.



- Fits glassware designed for rubber stopper size 2
- PTFE body with FKM o-ring seal assures proper centering of sensor probe in flask neck
- Cap material is yellow polypropylene
- Ref: ASTM Method D86

VWR Cat. No.	Body OD (mm)	Case Qty	
29618-006	6.5	1	

Class A Volumetric Flasks with Polyethylene Stopper

- KIMAX® flask with a graduation ring blasted on the neck
- Calibrated to contain
- With a marking spot on sizes 10 mL and larger
- Supplied with a 28160R polyethylene stopper to fit in the Standard Taper ground neck
- Enlarged top of the stopper will protect the neck if the flask is tipped
 over
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty	4
89001-976	5	±0.02	12	
89001-962	10	±0.02	12	
89001-972	25	±0.03	12	
89001-978	50	±0.05	12	
89001-964	100	±0.08	12	
89001-968	200	±0.10	12	
89001-974	250	±0.12	12	
89001-980	500	±0.20	12	
89001-966	1000	±0.30	6	
89001-970	2000	±0.50	4	1000

Serialized and Certified Class A Micro Volumetric Flasks with Glass Stopper

Volumetric flasks are ideal for measuring accurate volumes of liquids.

- Letters "TC" on the flask indicate to contain
- KIMAX® flask is permanently marked with an individual serial number and a marking spot
- Supplied with a Certificate of Graduation Accuracy
- Graduation ring blasted on the neck
- Standard Taper ground glass stopper is supplied with the flask
- Cylindrical bodies allow for better mixing, draining and withdrawal of samples by pipet
- Wide base (circular for sizes 1, 2, and 5 mL and hexagonal for sizes 10 and 25 mL) imparts much greater stability than is possible with a conventionally shaped flask
- Sizes 1-5 mL are designed from recommendations published by the Committee on Microchemical Apparatus of the Analytical Division, American Chemical Society, "Analytical Chemistry," 28, page 1993 (Dec. 1956).
- All sizes are designed from ASTM Specification E237, Class A serialized requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
89002-044	1	±0.010	6	1
89002-048	2	±0.015	6	
89002-050	5	±0.020	6	
89002-042	10	±0.020	6	NOT THE REAL PROPERTY.
89002-046	25	±0.030	6	(the state

Serialized and Certified Class A Volumetric Flasks with Pennyhead Glass Stoppers

Volumetric flasks are ideal for measuring accurate volumes of liquids.

- KIMAX® flask is permanently marked with an individual serial number and supplied with a Certificate of Graduation Accuracy.
- Graduation ring is blasted on the neck
- Letters "TC" on the flask indicate to contain
- Supplied with a marking spot and a Standard Taper ground glass stopper
- These flasks have been carefully selected to meet the requirements for accuracy, appearance, glass quality, calibration line, and inscriptions of former NBS Circular 602
- Designed from ASTM Specification E288, Class A serialized requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case
Cat. No.	(mL)	(mL)	Qty
89002-024	10	±0.02	12
89002-034	25	±0.03	12
89002-038	50	±0.05	12
89002-026	100	±0.08	12
89002-030	200	±0.10	12
89002-036	250	±0.12	12
89002-040	500	±0.20	12
89002-028	1000	±0.30	6
89002-032	2000	±0.50	4

Class A Volumetric Flasks with Pennyhead Glass Stopper

- KIMAX® flask with a single graduation ring blasted on the neck, calibrated to contain
- A Standard Taper ground glass stopper is supplied
- Marking spots on all sizes
- Replacement stopper is 850100
- Sizes 5 mL and larger are designed from ASTM Specification E288, Class A requirements
- 1 and 2 mL sizes are test tube-shaped and are calibrated to E237 tolerances
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	acity Tolerance	
Cat. No.	(mL)	(mL)	Qty
89001-914	1	±0.010	12
89001-922	2	±0.015	12
89001-932	5	±0.02	12
89001-916	10	±0.02	12
89001-928	25	±0.03	12
89001-934	50	±0.05	12
89001-918	100	±0.08	12
89001-924	200	±0.10	12
89001-930	250	±0.12	12
89001-936	500	±0.20	12
89001-920	1000	±0.30	6
89001-926	2000	±0.50	4

Class A Volumetric Flasks with Color-Coded PTFE Stopper

- KIMAX® flask with a graduation ring blasted on the neck
- Calibrated to contain
- With a marking spot on 10 mL and larger sizes
- The 2 mL size is test tube-shaped. All other sizes are of a conventional flask shape
- Supplied with a PTFE Standard Taper stopper which has a colorcoded handle
- Replacement stopper is 41901R
- The 5 mL and larger sizes are designed from ASTM Specification E288, Class A requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity	Tolerance	Case	
89001-946	2	+0.015	12	
89001-956	5	±0.02	12	
89001-940	10	±0.02	12	and a second
89001-952	25	±0.03	12	
89001-958	50	±0.05	12	
89001-942	100	±0.08	12	
89001-948	200	±0.10	12	
89001-954	250	±0.12	12	A
89001-960	500	±0.20	12	
89001-944	1000	±0.30	6	
89001-950	2000	±0.50	4	

Jointed Narrow Mouth Erlenmeyer Flasks

- Single neck flask with a Standard Taper outer joint.
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Standard Taper	Case	
Cat. No.	(mL)	Joints	Qty	
KT296500-0005	5	14/20	1	
KT296500-0010	10	14/20	1	
KT296500-0015	15	14/20	1	
KT296500-0025	25	14/20	1	
KT296500-0050	50	14/20	1	
KT296500-0100	100	14/20	1	
KT296500-0125	125	14/20	1	
10000-510	25	19/22	1	
10000-512	50	19/22	1	
10000-514	100	19/22	1	
KT296510-0125	125	19/22	1	
10000-516	250	19/22	1	
KT617000-0124	50	24/40	1	
KT617000-0224	125	24/40	1	
KT617000-0424	250	24/40	1	
KT617000-0624	500	24/40	1	
KT617000-0724	1000	24/40	1	
KT617000-0824	2000	24/40	1	
KT617000-1024	4000	24/40	1	
KT617000-1124	6000	24/40	1	
KT617000-0429	250	29/42	1	
KT617000-0629	500	29/42	1	
KT617000-0729	1000	29/42	1	
KT617000-0829	2000	29/42	1	
KT617000-0834	2000	34/45	1	
KT617000-0645	500	45/50	1	
KT617000-0745	1000	45/50	1	
KT617000-0845	2000	45/50	1	
KT617000-1045	4000	45/50	1	
KT617000-1145	6000	45/50	1	

Jointed, Narrow Mouth Erlenmeyer Flasks with Capacity Scale

- Flasks have 24/40 standard taper joint except for 50 mL flask, which has a 19/38 standard taper joint
- With capacity scale
- KIMAX® flask with a full length Standard Taper ground glass neck finish
- Ref: ASTM Method D94
- Designed from ASTM Specification E1404, Type II, Class I requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Range (mL)	Case Qty	P
89000-788	50	20 to 50	12	-
89001-332	125	50 to 125	12	1
89001-334	250	50 to 225	12	1 215
89001-336	500	100 to 500	12	250 - 20
89001-338	1000	250 to 1000	12	
89001-340	2000	600 to 2000	1	CALLER ES

Narrow Mouth Erlenmeyer Flasks

KIMAX® flasks for economy and versatility. These flasks are the choice for general laboratory usage.

- Tops are reinforced and tooled with a rounded finish, containing more glass to give them maximum mechanical strength
- Body is thick-walled, with a long tapered outside contour to minimize chipping when struck or rubbed together
- All flasks have durable white ceramic enamel scales to indicate approximate volumes at various levels, useful in measuring and mixing solutions where a high degree of accuracy is not necessary
- Designed from ASTM Specification E1404, Type I, Class I requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No	Capacity (ml.)	Graduation Range	Case Otv
89001-306	25	10 to 25	48
89001-308	50	20 to 50	48
89000-782	125	50 to 125	48
89001-310	250	50 to 225	48
89001-312	300	100 to 300	48
89001-314	500	100 to 500	36
89001-316	1000	250 to 1000	24
89001-318	2000	600 to 2000	8
89087-412	4000	1000 to 4000	1
89087-414	6000	1500 to 6000	1



Wide Mouth Erlenmeyer Flasks

- Heavy-duty tooled-top finish with capacity scale
- KIMAX® flask with a wide mouth.
- Designed from ASTM Specification E1404, Type I, Class II requirements
- Ref: ASTM Method D473
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Graduation Range	Case	
Cat. No.	(mL)	(mL)	Qty	
89001-354	125	50 to 125	48	
89000-794	250	50 to 225	48	
89001-356	500	100 to 500	36	
89001-358	1000	250 to 1000	24	
89001-360	2000	600 to 2000	8	

Graduated Filtering Flask with Side Tubulation

KIMAX® flask with side tubulation.

- Capacity scale
- Flasks are designed for vacuum to 29" of mercury
- Made with a heavier wall than a standard Erlenmeyer flask
- All sizes have side hose connection designed to accept 5/16 inch ID flexible tubing
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Range (mL)	Case Qty	4
89001-806	25	5 to 25	18	4000
89001-812	50	20 to 50	18	103
89001-802	125	50 to 125	18	
89001-808	250	50 to 250	18	
89001-814	500	150 to 500	18	250ml
89001-800	1000	300 to 1000	12	KIMAX E
89001-805	2000	600 to 2000	1	Constant S
89001-811	4000	1000 to 4000	1	

Three Vertical Neck Round Bottom Flask

- Three-neck heavy wall round-bottom flask with Standard Taper outer joints
- Side necks are vertical
- Ref: ASTM Method D1744
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Standard Taper	Case	
Cat. No.	(mL)	Joints: Center	Qty	
KT606000-0224	100	24/40	1	
KT606000-0624	250	24/40	1	123(45)
KT606000-4824	250	29/42	1	Store
46200-670	250	29/42	1	
KT606000-1024	500	24/40	1	

Flat Bottom Short Neck Boiling Flask

- KIMAX® boiling flask with a short Standard Taper joint neck.
- Designed from ASTM Specification E1403, Type I, Class IV requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Body OD (mm)	Case Qty	
89001-262	125	65	12	57
89001-264	250	83	12	
29114-050	300	87	12	
89001-266	500	102	12	ATAX 125 #
89001-268	1000	130	12	

Round Bottom Short Neck Flask

- KIMAX® boiling flask with a round bottom
- 25276 series has a medium length Standard Taper 14/20 joint
- 25277 series has a medium length Standard Taper 19/22 joint
- 25285 series has a full length Standard Taper 24/40 joint
- Designed from ASTM Specification E1403, Type II, Class III requirements
- Ref: ASTM Method D322
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Body OD	Case	
Cal. NO.	(111)	(11111)	Qty	
89000-772	100	63	12	
89001-276	250	82	12	
89000-774	100	63	12	
89000-776	250	82	12	
89001-278	500	102	12	1
89001-280	50	48	12	
89001-282	100	63	12	
89001-284	200	75	12	
89001-286	250	83	12	Soo me
89001-290	500	102	12	RU-20409
89000-778	1000	130	12	
89001-292	2000	161	6	
89001-294	3000	185	6	

Flat Bottom Boiling Flasks

- KIMAX® flasks have a low coefficient of expansion to resist thermal shock
- They are constructed with sturdy walls to minimize mechanical breakage and reinforced tooled tops for strength and a secure stopper fit
- Designed from ASTM Specification E1403, Type I, Class I requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Body OD (mm)	Case Qty	
89000-980	500	102	6	1000+
89000-982	1000	130	6	-
89001-260	6000	234	1	

Single Standard Taper Neck Round Bottom Flask

- Single neck flask with a Standard Taper outer joint
- Ref: ASTM Method D95
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Body OD (mm)	Case Qty	A
KT601000-0124	50	48	1	S00ml
KT601000-0129	50	48	1	
KT601000-0224	100	64	1	

Short Stem Addition Funnels

This KIMAX® funnel is constructed with heavy uniform walls, molded rims and fire-polished stems to give a long service life.

- Funnels have a high resistance to chemical attack and mechanical and thermal shock
- A piece of filter paper, when folded to form the filtering cone, forms a precise 60° angle. If the funnel is also 60°, as are the vast majority, then the only effective filtering area is down near the tip
- The exclusive KIMAX® 58° funnel promotes faster, more effective filtering because the cone is suspended by its uppermost edge, leaving most of the conical area for filtration
- Designed from ASTM Specification E1095, Type I, Class A requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	ID at Funnel Top (mm)	Length of Stem (mm)	Case Qty
89001-402	25	40	24
89001-404	35	50	24
89001-406	45	50	24
89001-408	55	63	48
89000-826	65	63	48
89000-828	75	75	48
89001-410	90	97	24
89001-412	100	97	24

KIMAX® Squibb Separatory Funnel with PTFE Stopcock

- KIMAX® funnel is supplied with a Standard Taper ground glass stopper and a PTFE stopcock
- Lower stems have an ID large enough that a column of liquid will "break" with the stopcock closed, thereby giving a more complete separation and eliminating the necessity of emptying the funnel
- Designed from ASTM Specification E1096, Type IV requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Stopcock Bore Size (mm)	Case Qty	
30352-142	30	2	4	Î
89002-108	60	2	4	125 m
89002-100	125	2	4	
89002-104	250	4	4	
89002-106	500	4	4	and the second
89002-098	1000	4	2	a state I
89002-102	2000	6	2	6

1-1/2" Stem Powder Addition Funnels

- KIMAX® funnel with a short, wide stem
- Constructed with a heavy uniform wall and a strong, fire-polished rim and stem to provide a long service life
- Funnel has a high resistance to chemical attack and mechanical and thermal shock
- Designed from ASTM Specification E1095, Type IV requirements
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	ID at Funnel Top (mm)	Length of Stem (mm)	Case Qty	17
89001-416	60	35	24	
89001-418	80	35	24	
89001-420	100	35	24	-
89001-422	125	35	12	
89001-424	150	35	12	

Oxidation Cell

Used in the measurement of inherent stability of middle distillate petroleum fuel under accelerated oxidizing conditions.

- The cell consists of a test tube, a condenser and an oxygen delivery tube
- Ref: ASTM D943 and D2274
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type 1 and ASTM E438, Type I, Class A requirements

VWR	Overall Height	OD	Case
Cat. No.	(mm)	(mm)	Qty
KT896600-0000	600	45	1

Petrochemical Distillation Apparatus for Water in Crude Oil

This apparatus is used for the determination of water in crude oil by distillation.

- Apparatus includes a 1000 mL round bottom flask with Standard Taper 24/40 joint, a distillation receiver with 0.05 graduations, a drying trap and a 400 mL Liebig condenser
- Ref: ASTM D4006
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

Cat. No.	Qty
<t513970-0000< td=""><td>1</td></t513970-0000<>	1

Petrochemical Filter Stick Apparatus with Hooks and Springs

- Apparatus used in the determination of oil content and solvent extractables in petroleum waxes.
- Assembly consists of a sintered glass filter stick with air pressure inlet tube and delivery nozzle and a cooling tube with 24/40 joints
- Supplied with one pair of springs
- Ref: ASTM D721
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Standard	Case
Cat. No.	Taper Joints	Qty
KT513880-0000	24/40	1

Unserialized Reusable To Deliver Volumetric Class A Pipets

- Cal brated To Deliver (TD)
- Color coded
- Designed from ASTM Specification E969, Class A requirements
- 75 and 200 mL sizes are designed from ASTM E542
- Manufactured from 51 expansion borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class B requirements

VWR	Capacity	Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
89003-340	1	± 0.006	12	
89085-724	1.5	± 0.006	12	
89003-342	2	± 0.006	12	
89085-726	2.5	± 0.006	12	
89003-344	3	± 0.01	12	1
89003-346	4	± 0.01	12	
89003-348	5	± 0.01	12	
89045-050	6	± 0.01	6	
89045-052	7	± 0.01	6	
93000-666	8	± 0.01	6	6 7
53046-179	9	± 0.02	6	
89003-350	10	± 0.02	12	
89085-728	12	± 0.02	12	
89003-352	15	± 0.03	12	
89003-362	20	± 0.03	12	
89003-364	25	± 0.03	12	
53046-600	30	± 0.03	6	
53046-602	40	± 0.05	6	
89003-366	50	± 0.05	12	
89085-730	75	± 0.05	6	
89003-368	100	± 0.08	12	
89085-732	200	± 0.16	6	
53046-065	0.5	± 0.006	12	

Reusable Class B Mohr Style Color-Coded TD Pipets

Designed with small tip openings for chemical laboratory work.

- Calibrated to deliver (TD)
- Scale is permanent brown stain fused into uniform bore tubing without etching
- Pipet is graduated to a base line which is on the straight tube above the taper
- Color-coded for ease in sorting and selecting the correct size pipet
- Manufactured from 51 expansion borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class B requirements

VWR Cat. No.	Capacity (mL)	Tolerance (mL)	Case Qty
72700-027	0.1	± 0.005	12
89003-508	1	± 0.02	12
89003-512	2	± 0.02	12
89003-516	5	± 0.04	12
89003-506	10	± 0.06	12
89003-514	25	± 0.10	12
53103-191	50	± 0.16	8

Ramsbottom Coking Bulb

The Ramsbottom Coking Bulb is used in the determination of carbon residue in petroleum products.

- Ref: ASTM D524
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and

ASTM E438, Type I, Class A requirements

VWR	Overall	OD	Case
Cat. No.	Height (mm)	(mm)	Qty
KT896650-0000	57	25	6

Saybolt Viscosity, Volumetric Flask, Class A

KIMAX® flask used in determining Saybolt viscosity of petroleum and bituminous materials as described in ASTM test methods D88 and E102. Made with heavy walls and a reinforced top. Graduation ring is blasted on the neck. Cal brated to contain. With marking spot.

			-	
VWR	Capcity	± Tolerance	Case	
Cat. No.	(mL)	(mL)	Qty	
10000-518 *	60	0.05	1	

Gas Measuring Tubes

KIMAX® gas measuring tube closed at the zero end for gas measurement.

- Durable black ceramic enamel scale
- Without stopcock
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Tolerance	Case
Cat. No.	(mL)	(mL)	Qty
32375-025	50	± 0.10	1

Gas Sampling Tubes with Glass Plugs and Plain Ends

 $\mathsf{KIMAX}\ensuremath{\textcircled{B}}$ gas collecting tube with tubulations on each end of the tube.

- Tubulations accept 3/8 inch ID tubing
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Standard Taper	Case
Cat. No.	(mL)	Stopcock Size	Qty
89002-136	500	4	1



API Graduated Centrifuge Tubes

Used to determine the bottom sediment and water in petroleum.

- KIMAX® tube with a long taper
- Calibrated to contain
- Scale, legend and marking spot are durable white ceramic enamel
- Referred to as the "finger" tube
- Made in accordance with the former specifications of the American Petroleum Institute (API Standard 2542)
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

Graduation Intervals (%):	Toleranc	æ (%):			
0-3 in 0.2		0 to1 – 0.10			
		Above 1	to 2 – 0.7	15	
3-10 in 0.5		Above 2 to 5 – 0.20			Ī
		Above 5 to 10 – 0.40			
10-50 in 1)-50 in 1		Above 10 to 25 – 0.50		
At 100	At 100		Above 25 – 1.00		
VWR Cat. No.	Capacity (%)		Max RCF	Case Qty	
21104-004	100 (12.5 mL)		2980	12]

Goetz Graduated Centrifuge Tubes

KIMAX® tube used for the determination of small quantities of solids in large volumes of liquids. Recommended for the determination of free water and sediment in diesel and other distillate fuels, as a pass-fail indication of product quality (ASTM D2709).

- Calibrated to contain.
- Durable black ceramic enamel scale
- Replacement stopper is 850100
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

* Do not centrifuge with stopper in tube.

- Stem graduations in 0.01 mL to 0.2 mL with a tolerance of ±0.01 mL
- Body graduation at 25 mL with a tolerance of ±1.0 mL
- Body graduations at 50 and 100 mL with a tolerance of ±2.0 mL

VWR	Capacity	Tolerance (mL)	Case
Cat. No.	(mL)		Qty
89002-224	100	0 to 0.2 - ±0.01, at 25 - ±1.00, above 25 - ±2.00	6

Graduated Test Tubes with Beaded Rim

- Excellent choice for general laboratory use
- Plain top, beaded rim
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

· ·			
VWR	Capacity	Graduation	Case
Cat. No.	(mL)	Range (mL)	Qty
KT898250-0005	5	0-5	1
KT898250-0025	25	0-25	1

Pear-Shaped Centrifuge Tubes with White Scale

KIMAX® tube used in the determination of bottom sediment and water in petroleum products.

- Calibrated to contain
- Stem diameter holds 1.5 mL
- Scale and legend are durable white ceramic enamel
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

89002-232				
Graduation Intervals (mL):	Tol	erance (mL):		
0-1.5 in 0.1	0 to	o 1.5 - ±0.03		
1.5-5 in 0.5	Abo	ove 1.5 to 3 -	±0.20	
	Above 3 to 5 - ±0.30			
5-10 in 1	Above 5 to 10 - ±0.50			
10-25 in 5	Above 10 to 25 - ±1.0			
At 50 and 100	Above 25 - ±2.0			
89002-234				
Graduation Intervals (%):	Tol	erance (mL):		
0-3 in 0.1	0 to	o 1.5 - ±0.03		
	Abo	ove 1.5 to 3 -	±0.2	
3-5 in 0.5	Abo	ove 3 to 5 - ±	0.3	
5-10 in 1	Abo	ove 5 to 10 -	±0.5	
10-100 in 10	Above 10 to 25 - ±1.0			
100-200 in 20	Abo	ove 25 - ±2.0		
VWR Cat No		Capacity (ml.)	Max RCF	Case Otv
89002-232		100	800	12

Pear-Shaped Centrifuge Tubes with Red Scale

Graduated tube is used for the determination of water and sediment in petroleum products.

100 (200%)

800

- Top is tooled for a size 5 rubber stopper
- Calibrated to contain

89002-234

 Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Graduation Intervals (mL)	Case
Cat. No.	(mL)		Qty
KT412510-0000	100	0-3 x 0.1, 3-10 x 0.5, and at 15, 20, 25, 50, and 100	1



Tubes

8" Oil Centrifuge Tubes

KIMAX® tube used in the determination of water and sediment in crude mineral oils, fuel oils and other petroleum products (D1796 and MPMS 10.4 standards); in determination of volume of precipitate formed by centrifuging definite quantities of steam cylinder stocks and black oils and other lubricating oils (ASTM D91 and D128); and in testing for acidity of distillation residues or hydrocarbon liquids of gasoline or petroleum solvents (ASTM D1093).

- Calibrated to contain
- Scale and legend are durable white ceramic enamel
- Top is tooled to accept snap cap 28150R-6
- Referenced in ASTM D4007, D91, D1796, D1093
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	Capacity	Graduation Intervals (mL)	Case
Cat. No.	(mL)		Qty
89002-226	100	0-0.5 in 0.05, 0.5-2 in 0.1, 2-3 in 0.2, 3-5 in 0.5, 5-10 in 1, 10-25 in 5, 25-100 in 25	12

6" Short Cone Oil Centrifuge Tubes

KIMAX® tube designed for field use in testing petroleum.

- Calibrated to contain
- Scale and legend are durable white ceramic enamel
- 16429-511 is graduated in %. 100 mL equals 200%
- Top is tooled to accept snap cap 28150R-6
- Referenced in ASTM D4007
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Intervals (mL)	Case Qty	5
89002-230	100	0-0.5 in 0.05, 0.5-2 in 0.1, 2-3 in 0.2, 3-5 in 0.5, 5-10 in 1, 10-25 in 5, and at 50, 100	12	e and
16429-511	200	0-0.1% in 0.10%, 1-4 in 0.20, 4-6 in 0.40, 6-10 in 1, 10-20 in 2, 20-50 in 10, and at 100, 200	6	

California Centrifuge Tube with Red Stripe

KIMAX® conical bottom centrifuge tube is used for testing of petroleum products according to ASTM D91, D893 and D1796.

- Tube has a permanent red stripe under the white enamel graduations for easy reading of results
- Scale and legend are durable white ceramic enamel
- Top is tooled to accept snap cap 28150R-6
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

requirements				
VWR Cat. No.	Capacity (mL)	Graduation Intervals (mL)	Case Qty	
89218-792	100	0-0.5 in 0.05, 0.5-2 in 0.1, 2-3 in 0.2, 3-5 in 0.5, 5-10 in 1, 10-25 in 5, and at 50, 75, 100	12	

8" Oil and Weathering (End Point Index) Centrifuge Tubes

Can be used in the determination of residues in Liquified Petroleum (LP) gases, ASTM Method D2158.

- KIMAX® tube used extensively in California
- Calibrated to contain
- Different graduations than 45240
- Scale and legend are durable white ceramic enamel
- Top is tooled to accept snap cap 28150R-6
- Ref: ASTM Method D2158
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR Cat. No.	Capacity (mL)	Graduation Intervals (mL)	Case Qty	
89002-228	100	0-1 in 0.05, 1-3 in 0.1, 3-6 in 0.2, 6-10 in 0.5, 10-100 in 1	12	

Soil Analysis Tube

These tubes are designed for use with Teledyne Tekmar 2016/2032 Autosamplers and 4100/4200 Automatic Samplers that are equipped with 3/4" diameter mounts.

- The larger opening of these disposable tubes permits easier sample loading and facilitates the weighing of solid and soil samples
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

VWR	OD (mm)	Length	Case
Cat. No.		(mm)	Qty
KT591175-0715	19	150	24

Cannon-Fenske Uncalibrated Serialized Viscometer Tubes

Cannon-Fenske uncalibrated viscometer tube for use in obtaining kinematic viscosities of transparent liquids (ASTM Method of Test D445).

- KIMAX® tube designed from ASTM Specification D446
- Permanently marked with an individual serial number
- Viscosity ranges shown below are for an efflux time greater than 200 seconds
- Lines and legend are printed black
- Ref: ASTM Method D445
- Manufactured from 33 expansion, low extractable borosilicate glass conforming to USP Type I and ASTM E438, Type I, Class A requirements

Calibration against a standard liquid of known viscosity or against a second viscometer with a known constant must be made before use.

VWR Cat No	Approximate Constant	Kinematic Centistokes	Size	Case Otv
52946-606	0.004	0.8 to 4	50	1
52946-628	0.015	3 to 15	100	1
52946-640	0.035	7 to 35	150	1
52946-661	0.1	20 to 100	200	1
52946-683	0.25	50 to 250	300	1
52946-708	0.5	100 to 500	350	1
52946-720	1.2	240 to 1200	400	1



ASTM METHODS

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