

## CANNON-FENSKER VISCOMETER



### Cannon-Fenske Viscometers

Quickly and easily measure viscosities of Newtonian liquids with these borosilicate glass capillary tube viscometers. Viscosity ranges are for an out-flow time of 200 seconds, except for size 25 - the minimum time for a viscosity of 0.5 centistokes ( $\text{cm}^2/\text{s}$ ) should be 250 seconds. Tubes comply with ASTM D 2515 and are used to obtain kinematic viscosities by ASTM D 445. Certificates of calibration are not supplied with this product.

Reference No. ASTM D 2515 and ASTM D 445

CATALOG NO.	KINEMATIC VISCOSITY RANGE	SIZE	QUANTITY / PACK	PRICE
LG-11120-100	0.5/2 centistokes ( $\text{cm}^2/\text{s}$ )	25	1	\$126.76
LG-11120-102	0.8/4 centistokes ( $\text{cm}^2/\text{s}$ )	50	1	\$126.76
LG-11120-104	1.6/8 centistokes ( $\text{cm}^2/\text{s}$ )	75	1	\$126.76
LG-11120-106	3/15 centistokes ( $\text{cm}^2/\text{s}$ )	100	1	\$124.74
LG-11120-108	7/35 centistokes ( $\text{cm}^2/\text{s}$ )	150	1	\$126.76
LG-11120-110	20/100 centistokes ( $\text{cm}^2/\text{s}$ )	200	1	\$126.76

## ENTRAINED AIR INDICATOR



### Entrained Air Indicator

Used for quick field determination of air content in fresh concrete batches, this entrained air indicator tube assembly consists of a borosilicate glass tube and a rubber stopper with a brass cup attached to hold the cement sample. Stem of the precision bore tube is graduated to read percent of air per cubic foot of concrete.

CATALOG NO.	DESCRIPTION	QUANTITY / PACK	PRICE
LG-10805-100	Tube and Stopper Assembly	1	\$47.36
LG-10805-102	Air Indicator Tube	1	\$19.41
LG-10805-104	Stopper Assembly	1	\$31.35
LG-10805-106	Brass Cup	1	\$5.30

## FLUORESCENT INDICATOR



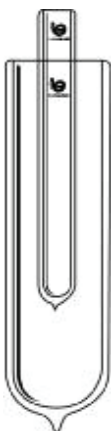
### Fluorescent Indicator Adsorption Columns

Used to determine saturates, nonaromatic olefins, and aromatics in petroleum fractions that distill below 315° C as specified in ASTM D 1319 Standard Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption. The standard column is drawn to a fine point for retaining silica gel. The precision bore column has a removable capillary tip joined to the analyzer section by a 12/2 spherical joint. Both columns are approximately 160 cm in length and have a 28/12 socket joint at the top.

Reference No. ASTM D 1319 Standard Method for Hydrocarbon Types in Liquid Petroleum Products by Fluorescent Indicator Adsorption

CATALOG NO.	DESCRIPTION	JOINT	LENGTH	QUANTITY / PACK	PRICE
LG-5931-100	Standard Fluorescent Indicator Adsorption Column	SJ 28/12	1600mm	1	\$92.37
LG-5931-102	Precision Fluorescent Indicator Adsorption Column with Removable Tip	SJ 28/12 top, SJ 12/2 bottom	1600mm	1	\$252.64

## FREEZING POINT DEWAR



### Dewar Freezing Point Cylinder Apparatus

This freezing point apparatus consists of two unsilvered Dewar borosilicate glass flasks. The inner flask contains the sample while the outer flask holds the coolant.

Reference: ASTM D2386 Test Method for Freezing Point of Aviation Fuels.

CATALOG NO.	DESCRIPTION	O.D.	LENGTH	QUANTITY / PACK	PRICE
LG-7681-100	Complete Apparatus			1	\$509.38
LG-7681-102	Outer Vacuum Flask	90mm	280mm	1	\$339.84
LG-7681-104	Inner Sample Flask	30mm	238mm	1	\$183.02

## HYDROXYPROPOXY DETERMINATION



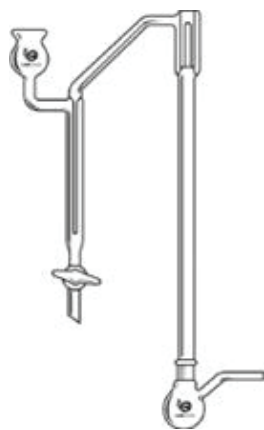
### Hydroxypropoxy Determination Apparatus

Complete apparatus as described in USP 23-NF 18 (421) for hydroxypropoxy group determinations.

This borosilicate glass apparatus includes a 125mL conical bottom flask with a Standard Taper 24/40 outer joint, thermocouple well and an inlet with a 1.0mm capillary tip for nitrogen and water, distillation head, condenser head, and condenser. A 250mL Erlenmeyer flask (C-4980-250) is supplied as a receiver.

CATALOG NO.	DESCRIPTION	CAPACITY	JOINT	QUANTITY / PACK	PRICE
LG-6606-100	Complete HPD Apparatus			1	\$529.52
LG-6606-102	Conical Boiling Flask	125mL		1	\$245.89
LG-6606-104	Distillation Head		ST 24/40, SJ 12/5	1	\$89.15
LG-6606-106	Condenser Head		ST 19/38, SJ 12/5	1	\$94.99

## METHOXY DETERMINATION

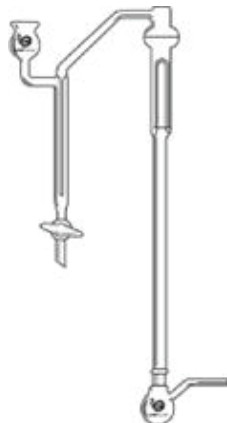


### Methoxy Determination Apparatus

Complete borosilicate glass distilling apparatus is one piece with a separate boiling flask. A Standard Taper 2mm stopcock serves as a drain. Equipped with a capillary sidearm, the flask is 25mL and has a Standard Taper 14/20 outer.

Reference: ASTM D 914 Methods of Testing Ethylcellulose ASTM D 1347 Methods of Testing Methylcellulose. ASTM D 2363 Methods of Testing Hydroxypropyl Methylcellulose

CATALOG NO.	DESCRIPTION	CAPACITY	JOINT	QUANTITY / PACK	PRICE
LG-6610-100	Complete Distilling Apparatus			1	\$323.05
LG-6610-102	Column, Scrubber, Absorption Tube Assembly			1	\$269.24
LG-6610-104	Flask	25mL	ST 14/20	1	\$67.84



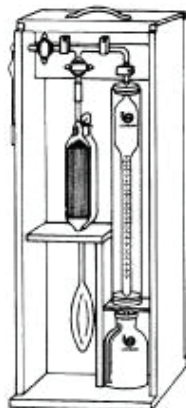
## Micro Methoxy Determination Apparatus

Complete borosilicate glass distilling apparatus consists of a 25mL flask (LG-6610-104) with a Standard Taper 14/20 outer joint and capillary sidearm for the introduction of carbon dioxide or nitrogen. Included in the assembly is a column, scrubber trap, and an absorption tube with a Standard Taper 2mm stopcock as a drain. With a 35/20 socket joint on top, the body of the scrubber is part of the column assembly and the trap includes a separate tube which is inverted within the scrubber body. Two clamps, size 35 (LG-1045-112) and size 14 (LG-1006-100) are supplied with the complete apparatus.

Reference: USP 23 (431) Methoxy Determination

CATALOG NO.	DESCRIPTION	CAPACITY	JOINT	QUANTITY / PACK	PRICE
LG-6615-100	Complete Distilling Apparatus	25mL		1	\$350.29
LG-6615-102	Column with Scrubber Body		ST 14/20, SJ 35/20	1	\$148.98
LG-6615-104	Scrubber Trap Tube			1	\$114.97
LG-6615-106	Absorption Tube		SJ 35/20	1	\$59.42

## ORSAT-MUENCKE APPARATUS



## Orsat-Muencke Apparatus

This gas analysis apparatus is for the determination of carbon dioxide. Complete unit consists of a jacketed buret, an absorption pipet, manifold, 250mL leveling bottle, orsat bag, and accessories. The borosilicate glassware is mounted in a wooden carrying case with removable front and back panels.

CATALOG NO.	DESCRIPTION	QUANTITY / PACK	PRICE
LG-8514-100	Complete Gas Analysis Apparatus	1	\$1041.82
LG-8514-102	Buret	1	\$304.78
LG-8514-104	Buret Water Jacket	1	\$40.36
LG-8514-106	Absorption Pipette	1	\$186.52
LG-8514-108	Manifold	1	\$200.47
LG-8514-110	Drying Tube	1	\$23.07
LG-8514-114	Leveling Bottle, 250mL	1	\$55.79
LG-8514-116	Rubber Orsat Bag, 2 x 4"	1	\$23.47

## ROSS-MILES POUR FOAM



### Ross-Miles Foam Test Apparatus

Designed for testing foaming properties of surface active agents, this foam test apparatus consists of a 200mL foam pipette with a 2mm PTFE straight bore stopcock, and a foam receiver with graduations at 50mL and 250mL above a 6mm PTFE straight bore stopcock.

Reference: ASTM D 1173

CATALOG NO.	DESCRIPTION	CAPACITY	GRADUATIONS	STOPCOCK SIZE	QUANTITY / PACK	PRICE
LG-3941-100	Complete Apparatus				1	\$910.94
LG-3941-102	Foam Pipet	200mL		2mm PTFE	1	\$303.66
LG-3941-104	Foam Receiver		50mL and 250mL	6mm PTFE	1	\$616.22

## SETTLOMETER



### Mallory Direct Reading Settrometer

For use in the oxidized sludge process as required for treatment of sewage and other wastes, this settlometer is a 2000mL heavy wall borosilicate glass cylinder and measures 5-1/8" I.D. x 7-1/2" high. It is graduated in cc per liter and hundredths of a foot.

CATALOG NO.	CAPACITY	QUANTITY / PACK	PRICE
LG-5601-100	2000mL	1	\$228.03

## SPECIFIC GRAVITY



### Chapman Specific Gravity Flask

The Chapman flask has a wide base and two bulbs for determining the percentage of voids and surface moisture in fine aggregate. Graduated at 200mL between the bulbs, and from 375mL to 450mL in 1mL divisions in the neck. Used in ASTM C 70, AASHTO T-142, ANS A37.21, and CRD-C111.

Reference No. ASTM C 70

CATALOG NO.	CAPACITY	GRADUATIONS	QUANTITY / PACK	PRICE
LG-3544-100	450mL	1mL	1	\$216.25

### Gay-Lussac Specific Gravity Bottles

These unadjusted borosilicate glass specific gravity bottles determine the density of liquid samples. They have capillary stoppers, and ground Standard Taper joints to reduce evaporation.



CATALOG NO.	APPROXIMATE CAPACITY	JOINT	QUANTITY / PACK	PRICE
LG-3530-104	10mL	ST 10/18	1	\$81.96
LG-3530-110	100mL	ST 10/18	1	\$105.36
LG-3530-106	25mL	ST 10/18	1	\$85.42
LG-3530-108	50mL	ST 10/18	1	\$100.59
LG-3530-100	2mL	ST 7/15	1	\$80.52
LG-3530-102	5mL	ST 7/15	1	\$79.03

## Gay-Lussac Adjusted Specific Gravity Bottles

These borosilicate glass specific gravity bottles are accurately adjusted at 20°C to determine the density of liquid samples. While the joints have Standard Taper dimensions, the capillary stoppers are not interchangeable since the final adjustment for volume is made on the stopper. Each bottle and its stopper carry the same identifying number.



CATALOG NO.	CAPACITY	VOLUME TOLERANCE	JOINT	QUANTITY / PACK	PRICE
LG-3540-100	2mL	±0.03mL	ST 7/15	1	\$145.29
LG-3540-102	5mL	±0.03mL	ST 7/15	1	\$147.07
LG-3540-110	100mL	±0.10mL	ST 10/18	1	\$166.07
LG-3540-108	50mL	±0.08mL	ST 10/18	1	\$162.94
LG-3540-106	25mL	±0.05mL	ST 10/18	1	\$158.91
LG-3540-104	10mL	±0.04mL	ST 10/18	1	\$148.69

## Hubbard Specific Gravity Bottle

This borosilicate glass specific gravity bottle is used in standard test methods for specific gravity of a variety of semi solid materials and emulsions, such as asphalt cements, road tars, road oils, and soft tar pitches. The solid Standard Taper stopper has a hole approximately 1.6mm in diameter through the center to allow excess sample to escape.

Reference: ASTM D 70, AASHTO Method T 43



CATALOG NO.	CAPACITY	APPROX HEIGHT	APPROX DIAMETER	STOPPER SIZE	QUANTITY / PACK	PRICE
LG-3541-100	24mL	72mm	27mm	ST 24/12	1	\$116.45

## Hubbard-Carmick Specific Gravity Bottle

For use with viscous fluids, semi-solid bitumen and emulsions.



CATALOG NO.	CAPACITY	HEIGHT	DIAMETER	JOINT	QUANTITY / PACK	PRICE
LG-3542-100	25mL	55mm	40mm	ST 24/12	1	\$133.07

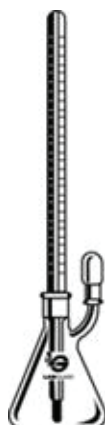


## Le Chatelier Specific Gravity Bottle

Used to determine the specific gravity/density of sand, cement and other fine materials, this borosilicate glass specific gravity bottle is developed from ASTM C 188 and ASTM E 694. The body holds approximately 250mL and the capacity of the oval bulb in the neck is 17mL. Volume below the bulb is graduated from 0 to 1.0mL in 0.1mL subdivisions, with an additional 0.1 subdivision below the 0 and above the 1.0mL mark. The neck is graduated from 18 to 24mL in 0.1mL subdivisions above the bulb (white graduations). Supplied with a Standard Taper stopper.

Reference No. ASTM C 188 and ASTM E 694

CATALOG NO.	APPROXIMATE CAPACITY	VOLUME TOLERANCE	STOPPER SIZE	QUANTITY / PACK	PRICE
LG-3543-100	250mL	±0.05mL	ST 13	1	\$160.01



## Pycnometer Specific Gravity Bottle Apparatus

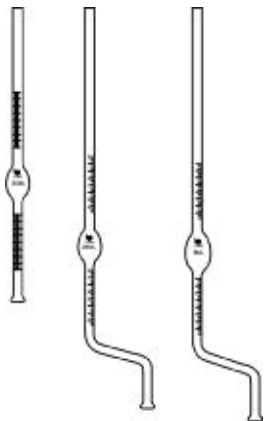
With a conical flask body to give maximum stability, these specific gravity bottles/pycnometers come complete with flask, thermometer, and cap. The thermometer used for 25mL size has a Standard Taper 10/18 with temperature range of +14°C to 38°C. The 50 and 100mL sizes are used to obtain the specific gravity of pigments (ASTM Method of Test D153). The cap, used for all bottle sizes, has a Standard Taper 5/12 joint.

Reference No. ASTM Method of Test D 153

CATALOG NO.	DESCRIPTION	CAPACITY	JOINT	QUANTITY / PACK	PRICE
LG-3550-102	Bottle	25mL		1	\$272.71
LG-3550-104	Complete Apparatus	50mL		1	\$280.60
LG-3550-106	Complete Apparatus	100mL		1	\$292.19
LG-3550-202	Bottle	25mL		1	\$184.26
LG-3550-204	Bottle	50mL		1	\$180.90
LG-3550-206	Bottle	100mL		1	\$202.66
LG-3550-310	Thermometer for 25mL Flask			1	\$84.65
LG-3550-312	Thermometer for 50 and 100mL Flask			1	\$86.31
LG-3550-320	Cap		ST 5/12	1	\$37.43



## STALAGMOMETER



### Stalagmometer Tubes

Specifically designed for checking the surface tension of liquids, each tube is accurately calibrated to quickly determine surface tension by the drop count method. Graduated above and below the bulb, tubes are available in 2.5, 3.5, and 5.0mL sizes. The 2.5 and 5.0mL sizes allow for flexibility in sample size of most liquid baths, while the 3.5mL size is used for more viscous applications. Available individually or in a complete set of 3 tubes (1 of each size) with a protective case. All tubes are supplied with instructions for use.

CATALOG NO.	DESCRIPTION	CAPACITY	QUANTITY / PACK	PRICE
LG-5050-100	Complete Tube Set	2.5, 3.5, and 5.0mL	1	\$882.80
LG-5050-102	Tube Only	2.5mL	1	\$276.72
LG-5050-104	Tube Only	3.5mL	1	\$271.43
LG-5050-106	Tube Only	5mL	1	\$271.43
LG-5050-200	Tube Case		1	\$61.05