

VEE GEE

LABORATORY EQUIPMENT & SUPPLIES



novatech
INTERNATIONAL

sales@novatech-usa.com
www.novatech-usa.com

Tel: (866) 433-6682
Tel: (281) 359-8538

Fax: (866) 433-6684
Fax: (281) 359-0084

VEE GEE



novatech
INTERNATIONAL

sales@novatech-usa.com

www.novatech-usa.com

Tel: (866) 433-6682

Fax: (866) 433-6684

Tel: (281) 359-8538

Fax: (281) 359-0084

TABLE OF CONTENTS



3. Glassware & Accessories



17. Pipetting Products



22. Polarimeter



23. Refractometers



28. Microscopes



34. Hydrometers



43. Thermometers



48. Lab Equipment

Glass Beakers

These low-form Griffin beakers feature easy-pour spouts and permanent white graduations

- Uniform wall thickness - ideal for heating applications
- Made from high-quality borosilicate tubing with a low coefficient of expansion
- Graduation accuracy $\pm 5\%$ of full capacity

SIBATA Beakers

SIBATA BEAKERS					
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Pack Qty.
10020-50A	50	20 to 50	10	46 x 60	10
10020-100A	100	20 to 100	10	55 x 70	10
10020-200A	200	50 to 200	25	67 x 89	10
10020-300A	300	50 to 300	50	78 x 103	10
10020-500A	500	100 to 500	50	90 x 120	10
10020-1000A	1000	200 to 1000	100	110 x 150	6
10020-2000	2000	250 to 2000	250	135 x 200	1
10020-3000	3000	500 to 3000	250	153 x 225	1



VEE GEE Beakers

- Beakers are double-graduated metric except for 20229-10
- Meet ASTM E-960 Type I Specifications for Classification, Design, Capacity & Dimensions, and Markings

VEE GEE BEAKERS						
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
20229-10	10	--	--	25 x 35	12	48
20229-20	20	5 to 15	5	32 x 45	12	48
20229-30	30	5 to 25	5	34 x 55	12	48
20229-50	50	10 to 45	5	41 x 60	12	48
20229-100	100	20 to 80	10	50 x 75	12	48
20229-150	150	20 to 140	10	57 x 90	12	48
20229-250	250	25 to 200	25	68 x 100	12	48
20229-400	400	25 to 325	25	78 x 112	12	48
20229-600	600	50 to 500	50	90 x 125	6	36
20229-1000	1000	50 to 1000	50	108 x 150	6	24
20229-2000	2000	200 to 1800	100	130 x 188	4	8
20229-3000	3000	250 to 2500	125	149 x 212	1	6



Glass Burets

Used to accurately dispense a liquid, for example in a manual titration

- Designed "To Deliver"
- Made from high-quality borosilicate tubing with a low coefficient of expansion
- Feature durable, permanent markings; fine, sharp lines; and large easy-to-read numbers
- Supplied with PTFE stopcocks to eliminate freezing and lubricant contamination
- Meet ASTM E-287 Class A Specifications



Durable, permanent markings



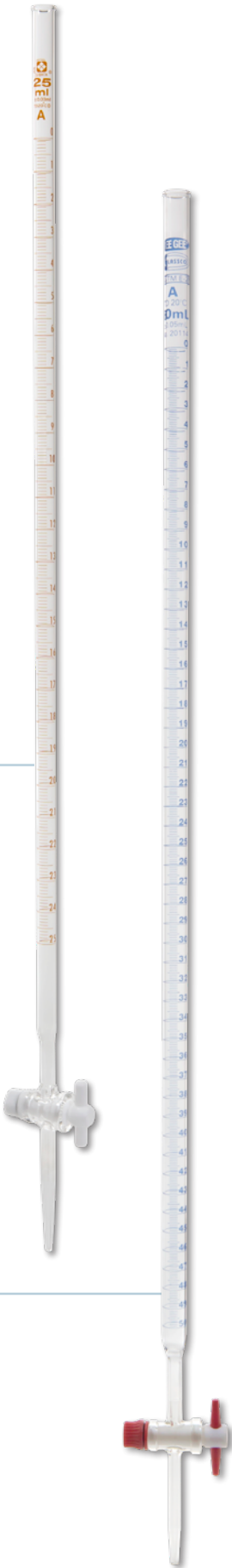
PTFE stopcock

SIBATA Burets

SIBATA BURETS							
Cat. No.	Capacity (mL)	Graduation Interval (mL)	Tolerance (±mL)	Stopcock Bore (mm)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
021310-10	10	0.05	0.02	4	9.1 x 570	1	20
021310-25	25	0.10	0.03	4	11 x 640	1	20
021310-50	50	0.10	0.05	4	12.6 x 840	1	25

VEE GEE Burets

VEE GEE BURETS							
Cat. No.	Capacity (mL)	Graduation Interval (mL)	Tolerance (±mL)	Stopcock Bore (mm)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
20114-10	10	0.05	0.02	2	9 x 510	1	24
20114-25	25	0.10	0.03	2	12 x 550	1	24
20114-50	50	0.10	0.05	2	13 x 758	1	24
20114-100	100	0.20	0.10	2	17 x 775	1	24



Separatory Funnels

Feature smooth tooled tips, large white block letters, and large marking squares

- Supplied with PTFE stopcocks to eliminate freezing and lubricant contamination
- Made from high-quality borosilicate tubing with a low coefficient of expansion

SIBATA Separatory Funnels with Stopper - Squibb Style

SIBATA SEPARATORY FUNNELS WITH STOPPERS - SQUIBB STYLE							
Cat. No.	Capacity (mL)	Stopper No.	Stopcock Plug Size	Approx. O.D. x Stem Length (mm)	Approx. Total Length (mm)	Pack Qty.	Case Qty.
1426T-300	300	24/40	4	10 x 70	390	1	6
1426T-500	500	24/40	4	10 x 70	430	1	6
1426T-1000	1000	29/42	6	12 x 80	490	1	4
1426T-2000	2000	29/42	6	12 x 80	510	1	2



VEE GEE Separatory Funnels with Stopper - Squibb Style

- All sizes supplied with a polyethylene standard taper stopper
- Meet ASTM E-1096 Type 4 Specifications for Classification, Design, and Markings

VEE GEE SEPARATORY FUNNELS WITH STOPPERS - SQUIBB STYLE							
Cat. No.	Capacity (mL)	Stopper No.	Stopcock Plug Size	Approx. O.D. x Stem Length (mm)	Approx. Total Length (mm)	Pack Qty.	Case Qty.
20149-250	250	22	2	10 x 65	345	1	24
20149-500	500	27	4	10 x 65	392	1	24
20149-1000	1000	27	4	12 x 70	400	1	12
20149-2000	2000	38	6	12 x 75	570	1	9



Erlenmeyer Flasks

Feature heavy-duty rims to reduce chipping, white permanent graduations, and marking squares

- Made from high-quality borosilicate tubing with a low coefficient of expansion
- Uniform wall thickness - ideal for heating applications
- Graduation accuracy is $\pm 5\%$ of full capacity

SIBATA Erlenmeyer Flasks

SIBATA ERLENMEYER FLASKS							
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Approx. O.D. of Neck (mm)	Rubber Stopper No.	Pack Qty.
10530-100A	100	40 to 100	10	64 x 105	22	2	10
10530-300A	300	100 to 300	25	87 x 156	34	6	10
10530-500A	500	200 to 500	50	105 x 180	34	6	10
10530-1000A	1000	400 to 1000	50	131 x 220	42	8	10
10530-2000	2000	800 to 2000	200	166 x 280	50	10	1



VEE GEE Erlenmeyer Flasks

- Flasks with capacity of 25, 50, and 125 mL meet ASTM E-1404 Type I, Class 1 Specifications for Classification, Design, Capacity & Dimensions, and Markings

VEE GEE ERLENMEYER FLASKS								
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Approx. O.D. of Neck (mm)	Rubber Stopper No.	Pack Qty.	Case Qty.
20231-25	25	10 to 25	5	42 x 67	22	0	12	48
20231-50	50	20 to 50	5	51 x 81	22	1	12	48
20231-125	125	50 to 125	25	68 x 117	22	5	12	48
20231-250	250	100 to 250	25	84 x 138	34	6	12	48
20231-500	500	200 to 500	50	105 x 178	34	7	6	36
20231-1000	1000	400 to 1000	50	128 x 220	34	9	6	24
20231-2000	2000	600 to 1800	100	164 x 280	50	10	1	8



Filtering Flasks

Constructed of heavy wall borosilicate glass to withstand high vacuum

- Used in conjunction with vacuum filter systems, these filtering flasks feature heavy-duty rims to reduce chipping
- Feature white permanent graduations and large marking square

SIBATA Filtering Flasks

- Port for tubulation has an outside diameter of 10 mm

SIBATA FILTERING FLASKS					
Cat. No.	Capacity (mL)	Approx. O.D. x Height (mm)	Rubber Stopper No.	Pack Qty.	Case Qty.
1780T-300	300	86 x 140	8	1	12
1780T-500	500	105 x 170	8	1	12
1780T-1000	1000	131 x 220	8	1	8
1780T-2000	2000	166 x 270	8	1	4



VEE GEE Filtering Flasks

- Port for tubulation has an outside diameter of 10 mm
- Graduation accuracy is $\pm 5\%$ of full capacity
- Meet ASTM E-1406 Type II, Class 1 Specifications for Classification, Design, Capacity & Dimensions, and Markings

VEE GEE FILTERING FLASKS							
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Rubber Stopper No.	Pack Qty.	Case Qty.
20074-250	250	75 to 250	25	86 x 160	6	6	18
20074-500	500	150 to 500	50	107 x 190	7	6	18
20074-1000	1000	400 to 1000	50	135 x 242	8	6	12
20074-2000	2000	600 to 2000	100	165 x 288	9	1	8



VEE GEE Media Bottles

Commonly used to contain chemicals in liquid or powder form in laboratories

- Constructed of borosilicate glass in compliance with ASTM 438 Type 1
- Available in clear or amber (low actinic) for light sensitive chemical compounds
- Blue plastic caps have GL-45 DIN threads, include a pouring ring, and are autoclavable
- Sharp white markings include a large marking square for labeling

VEE GEE Clear Media Bottles

VEE GEE CLEAR MEDIA BOTTLES						
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Diameter (mm)	Height (mm)	Pack Qty.
20274-100	100	20 to 80	20	56	100	10
20274-250	250	50 to 200	50	70	138	10
20274-500	500	100 to 400	100	86	176	10
20274-1000	1000	100 to 900	100	101	225	10
20274-2000	2000	400 to 1800	200	136	260	4



VEE GEE Amber Media Bottles

VEE GEE AMBER MEDIA BOTTLES						
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Diameter (mm)	Height (mm)	Pack Qty.
20275-100	100	20 to 80	20	56	100	10
20275-250	250	50 to 200	50	70	138	10
20275-500	500	100 to 400	100	86	176	10
20275-1000	1000	100 to 900	100	101	225	10
20275-2000	2000	400 to 1800	200	136	260	4



Lead Rings

Stabilize vessels and labware on the bench or in water baths

- Vinyl-coated lead rings will not mark or scratch benchtops and labware
- C-shape format allows some manual size variation for a customized fit

LEAD RINGS								
Cat No.	Shape	Color	Flask Sizes (mL)	ID (in)	ID (cm)	OD (in)	OD (cm)	Weight* (g)
20335-1	C	Blue ■	125–500	1.9	4.2	3	7.5	215
20335-2	O	Blue ■	125–500	1.9	4.8	3	7.7	210
20335-3	C	Blue ■	250–1000	2	5.1	3.5	9	465
20335-4	O	Blue ■	250–1000	2	5.1	3.5	9	490
20335-5	C	Blue ■	500–2000	2.1	5.4	3.9	9.8	595
20335-6	O	Blue ■	500–2000	2.2	5.7	3.9	9.8	610
20335-7	C	Blue ■	1000–4000	2.6	6.6	4.4	11.3	890
20335-8	O	Blue ■	1000–4000	2.8	7	4.5	11.5	935

**Weights may vary by +/- 3%*



SIBATA Class A Graduated Cylinders

Class A, Double-Metric Scale, Graduated, To Contain, Calibration Temperature 20°C

- Graduated Cylinders feature hexagonal bases for added stability
- All sizes, except the 2000 mL size, come with a protective, polyethylene hexagonal bumper guard
- Constructed of borosilicate glass with durable white enamel markings
- Exceeds ASTM E-1272 Class A, Style I Specifications for Classifications and Tolerances

SIBATA CLASS A GRADUATED CYLINDERS							
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Tolerance (±mL)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2351A-5	5	0.5 to 5.0	0.1	0.05	12 x 126	4	48
2351A-10	10	0.7 to 10.0	0.1	0.05	13 x 182	4	48
2351A-20	20	1.0 to 20.0	0.2	0.05	16 x 200	4	48
2351A-25	25	1.4 to 25.0	0.2	0.15	17 x 210	4	48
2351A-50	50	3.5 to 50.0	0.5	0.25	24 x 218	4	48
2351A-100	100	5.0 to 100.0	1	0.40	30 x 236	4	48
2351A-250	250	10.0 to 250.0	2	1.00	41 x 301	4	24
2351A-500	500	25.0 to 500.0	5	2.00	53 x 362	2	12
2351A-1000	1000	50.0 to 1000.0	10	3.00	70 x 422	2	8
2351A-2000	2000	100.0 to 2000.0	20	6.00	90 x 478	1	6



SIBATA Class B Graduated Cylinders

Class B, Double-Metric Scale, Graduated, To Contain, Calibration Temperature 20°C

- Graduated Cylinders feature hexagonal bases for added stability
- All sizes, except the 2000 mL size, come with a protective, polyethylene hexagonal bumper guard
- Constructed of borosilicate glass with durable white enamel markings
- Exceeds ASTM E-1272 Class B, Style I Specifications for Classifications and Tolerances

SIBATA CLASS B GRADUATED CYLINDERS							
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Tolerance (±mL)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2351-10	10	0.7 to 10.0	0.1	0.10	13 x 182	4	48
2351-25	25	1.4 to 25.0	0.2	0.30	17 x 210	4	48
2351-50	50	3.5 to 50.0	0.5	0.40	24 x 218	4	48
2351-100	100	5.0 to 100.0	1	0.60	30 x 236	4	48
2351-250	250	10.0 to 250.0	2	1.40	41 x 301	4	24
2351-500	500	25.0 to 500.0	5	2.60	53 x 362	2	12
2351-1000	1000	50.0 to 1000.0	10	5.00	70 x 422	2	8
2351-2000	2000	100.0 to 2000.0	20	10.00	90 x 478	1	6



SIBATA Student Graduated Cylinders

Plastic Base, Double-Metric Scale, Graduated, To Contain, Calibration Temperature 20°C

- These economical graduated cylinders are made of two parts: a strong, borosilicate glass graduate and a detachable, sturdy plastic base which absorbs impacts and reduces breakage
- All cylinders come with a protective, polyethylene, hexagonal bumper guard
- All markings are in durable white enamel
- Exceeds ASTM E-1272 Class B, Style I Specifications for Classifications and Tolerances

SIBATA STUDENT GRADUATED CYLINDERS							
Cat. No.	Capacity (mL)	Graduation Range (mL)	Graduation Interval (mL)	Tolerance (±mL)	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2355-10	10	0.4 to 10.0	0.1	0.10	13 x 177	6	24
2355-25	25	1.4 to 25.0	0.2	0.30	16 x 210	6	24
2355-50	50	2.0 to 50.0	1.0	0.40	24 x 212	6	24
2355-100	100	5.0 to 100.0	1.0	0.60	30 x 232	6	24



SIBATA Class A Volumetric Flasks with Snap-Cap

Feature machine-blown bodies and heavy-beaded, heavy-tubing necks that are tooled for snap-cap fit

- Designed "To Contain" with a temperature of calibration at 20°C
- Constructed of borosilicate glass with a low coefficient of expansion
- Graduation line is sharply defined and of uniform width
- Each flask has a large marking square and includes a snap-cap closure
- Meet ASTM E-288 Class A Specifications & USP Standards for Volumetric Flasks

SIBATA CLASS A VOLUMETRIC FLASKS WITH SNAP-CAP

Cat. No.	Capacity (mL)	Tolerance (±mL)	Snap-Cap No.	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2303A-10	10	0.02	1	26 x 85	6	72
2303A-25	25	0.03	2	37 x 110	6	72
2303A-50	50	0.05	3	49 x 136	4	48
2303A-100	100	0.08	3	58 x 164	4	48
2303A-200	200	0.10	4	74 x 205	4	24
2303A-250	250	0.12	4	78 x 225	4	24
2303A-500	500	0.20	5	96 x 260	2	12
2303A-1000	1000	0.30	6	122 x 300	2	8



Snap-Cap



Preserve your solutions with
Parafilm® M self-sealing film pg. 16



SIBATA Class A Volumetric Flasks with Ground Glass Stopper

Feature machine-blown bodies and heavy-beaded, heavy-tubing necks that are tooled for standard taper glass stoppers

- Designed "To Contain" with a temperature of calibration at 20°C
- Constructed of borosilicate glass with a low coefficient of expansion
- Graduation line is sharply defined and of uniform width
- Each flask has a large marking square and includes a glass stopper
- Meet ASTM E-288 Class A Specifications & USP Standards for Volumetric Flasks

SIBATA CLASS A VOLUMETRIC FLASKS WITH GROUND GLASS STOPPER

Cat. No.	Capacity (mL)	Tolerance (±mL)	Stopper No.	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2306A-1	1	0.01	9	10 x 79	6	96
2306A-2	2	0.015	9	12 x 90	6	96
2306A-5	5	0.02	9	21 x 72	6	72
2306A-10	10	0.02	9	26 x 96	6	72
2306A-25	25	0.03	9	37 x 123	6	72
2306A-50	50	0.05	13	49 x 152	4	48
2306A-100	100	0.08	13	58 x 181	4	48
2306A-200	200	0.10	16	74 x 220	4	24
2306A-250	250	0.12	16	78 x 239	4	24
2306A-500	500	0.20	19	96 x 279	2	12
2306A-1000	1000	0.30	22	122 x 327	2	8
2306A-2000	2000	0.50	27	157 x 396	2	8



Safely dry glassware with our Lab Drying Rack *pg. 15* and Workstation Lab Mat *pg. 15*

SIBATA Amber Class A Volumetric Flasks

Constructed of low-actinic amber glass, providing protection for materials that are sensitive to light

- Feature machine-blown bodies and heavy-beaded, heavy-tubing necks that are tooled for standard taper glass stoppers
- Constructed of borosilicate glass with a low coefficient of expansion
- Designed "To Contain" with a temperature of calibration at 20°C
- Each flask has a large marking square and includes a glass stopper
- Meet ASTM E-288 Class A Specifications & USP Standards for Volumetric Flasks

SIBATA AMBER CLASS A VOLUMETRIC FLASKS						
Cat. No.	Capacity (mL)	Tolerance (±mL)	Stopper No.	Approx. O.D. x Height (mm)	Pack Qty.	Case Qty.
2307A-10	10	0.02	9	28 x 95	6	72
2307A-20	20	0.03	9	36 x 115	6	72
2307A-25	25	0.03	9	39 x 122	6	72
2307A-50	50	0.05	13	49 x 150	4	48
2307A-100	100	0.08	13	60 x 180	4	48
2307A-200	200	0.10	16	75 x 220	4	24
2307A-250	250	0.12	16	78 x 239	4	24
2307A-500	500	0.15	19	100 x 280	2	12
2307A-1000	1000	0.30	22	127 x 325	2	8



SIBATA Glass Stoppers

Stoppers are lightweight yet very strong to reduce chipping and breakage

- Flat top design allows the stopper to stand on its head, freeing the user's hands
- Fully interchangeable with other common flask stoppers and fit all standard labware of comparable standard taper size
- Meet ASTM E-675 Specifications

SIBATA GLASS STOPPERS						
Cat. No.	Standard Taper Stopper No.	Tinting	Approx. Length of Ground Zone (mm)	Height Above Ground Joint (mm)	Fit Volumetric Flasks	Pack Qty.
03081	9	Clear	14	10	2306A-1, -2, -5, -10, -25	6
03082	13	Clear	14	13	2306A-50, -100	6
03083	16	Clear	16.5	18	2306A-200, -250	6
03084	19	Clear	19	18	2306A-500	6
03085	22	Clear	20.5	20	2306A-1000	6
03087	27	Clear	21	21	2306A-2000	6
03081-A	9	Amber	14	10	2307A-5, -10, -20, -25	6
03082-A	13	Amber	14	13	2307A-50, -100	6
03083-A	16	Amber	16.5	18	2307A-200, -250	6
03084-A	19	Amber	19	18	2307A-500	6
03085-A	22	Amber	20.5	20	2307A-1000	6



Alcohol Burner

Use where you don't have natural gas for a Bunsen Burner

- Features a sturdy, heavy-walled glass design with a large capacity of 125 mL
- Fitted with a nickel-plated brass cap used to extinguish the flame and to prevent the evaporation of alcohol
- Use methyl or ethyl alcohol with this lamp
- Portable flame is ideal for student use

ALCOHOL BURNER

Cat. No.	Description	Capacity (mL)	Diameter	Height	Weight
3040	Alcohol Burner	125	80 mm	100 mm	240 g

REPLACEMENT WICKS

Cat. No.	Description	Pack Qty.
3040-W	Replacement Wicks	10 Wicks



Replacement Wicks



Grabbit Temp Mitts

Protect your hands from hot or cold labware

The silicone rubber mitt is designed to comfortably fit your hand and they have internal ribs in the pockets for added dexterity

- Oversized surfaces with nubs for secure grip
- Mitts withstand temperatures from -70 to 500°F (-57 to 260°C)



GRABBIT TEMP MITTS

Cat. No.	Color	L x W x H (in)	L x W x H (cm)
87001	Blue	7 x 3.9 x 1.3	17.7 x 10 x 3.2



Wire Drying Rack

A versatile self-standing draining and drying fixture that can be used on a table, by a sink, or easily mounted on the wall*

- Designed with eighteen 127mm (5") tall pins and seventy-two 76mm (3") tall pins, it holds up to 90 pieces of glassware, including beakers, flasks, bottles and more
- Durably constructed, the drip tray and back are made from polystyrene while the pins are spot-welded, vinyl-coated steel wire for extra durability
- Bottom drainage tray conveniently slides out for easy emptying

*mounting materials not included

WIRE DRYING RACK		
Cat. No.	L x W x H (in)	L x W x H (cm)
30201	18.2 x 7.4 x 20.7	46.2 x 18.2 x 52.5

Drain and dry
test tubes, beakers,
flasks, and other
labware



Bottom drainage tray
conveniently slides out
for easy emptying

Workstation Lab Mat

Safely facilitate workflow processes

- Protect counter tops from hot items up to 200°C (392°F)
- Lip around the edge can hold approx. 250 mL of liquid
- Small footprint, 12 x 14.9 x 0.1 in (30.5 x 37.9 x 0.2 cm)



WORKSTATION LAB MAT				
Cat No.	Color		L x W x H (in)	L x W x H (cm)
32000-1	Blue	■	12 x 14.9 x 0.1	30.5 x 37.9 x 0.2
32000-2	Purple	■	12 x 14.9 x 0.1	30.5 x 37.9 x 0.2

Gridded Surface

for tube staging,
preventing movement
of objects

Reversible

Side One: combination gridded
and smooth surface
Side Two: smooth surface only

Parafilm® M Sealing Film

Protect the integrity of your laboratory and research applications

Parafilm® M is a semi-transparent, flexible, thermoplastic film with two-way stretch

- Protect the integrity of research applications with a tight moisture-barrier that holds a strong seal and doesn't release from glassware, despite off-gassing
- Reduce the risk of tampered data with a covering that is odorless, colorless and semi-transparent
- Prevents moisture and volume loss due to material composition and tight seal
- Flexible and self-sealing material allows it to cling around irregular shapes and surfaces
- Resistant up to 48 hours against many polar substances such as saline solutions, inorganic acids and alkaline solutions
- Stretches more than 200% of original length
- Two color options available in 2" rolls (natural and purple) for color coding purposes



PARAFILM® M SEALING FILM						
Cat. No.	Color		Film Width (in)	(cm)	Roll Length (ft)	(m)
2200N-2-250	Natural	□	2	5	250	76.2
2200P-2-250	Purple	■	2	5	250	76.2
2200N-4-125	Natural	□	4	10	125	38.1
2200N-4-250	Natural	□	4	10	250	76.2
2200N-20-50	Natural	□	20	50.8	50	15.2

Parafilm® M is a registered trademark of Amcor Limited



Acrylic Dispenser for Parafilm® M Sealing Film

Store, dispense, and cut Parafilm® M, tape, labels, and Tough-Tags®

- Strong, crystal-clear acrylic dispenser makes your film supply visible and features a serrated cutting blade
- Rubber feet secures in place while cutting
- Dispenser holds one or two 50 mm (2-inch) rolls or one 100 mm (4-inch) roll

ACRYLIC DISPENSER FOR PARAFILM® M		
Cat. No.	L x W x H (in)	L x W x H (cm)
2200-1	4.7 x 6.6 x 6.9	11.9 x 16.8 x 17.5

*Parafilm® M is a registered trademark of Amcor Limited
Tough-Tags® is a registered trademark of Diversified Biotech*



Manual Pipet Controllers

Precise fluid control at your finger tips

Make your pipeting easier and more comfortable with these manual controllers. No power required, simply squeeze the bulb to draw up your liquid. Push the control switch up to aspirate your liquid and push it down to dispense. Works with glass or plastic serological and volumetric pipets ranging from 1 to 100 mL. Controllers include a replaceable 0.45 µm hydrophobic filter. The nose cone assembly is autoclavable.

Our Pipetting portfolio features products and devices for liquid sample handling.

From controllers and pipets to help collect, measure, and transfer liquids to stands and racks for secure organization, we've got your pipetting needs covered.

Inline Controller

- Ergonomic design reduces stress on your hand
- Easily aspirate and dispense by using the control switch
- Blow out remaining liquid with the smaller central bulb on the controller

Nose Cone
Autoclavable



One-Handed Controller

- Control all functions with one hand for easy operation
- The aspirate/dispense and blow out controls are perfectly positioned for control by your thumb



Nose Cone
Autoclavable



MANUAL PIPET CONTROLLERS

Cat. No.	Type	No. of Channels	Volume Range	Dimensions (L x W x H)
70101	Inline	Single	1 to 100 mL	230 x 54 x 54 mm
70103	One-Handed			180 x 45 x 120 mm

SIBATA Resuable Glass Pipets

Our SIBATA reusable glass pipets are meticulously manufactured for tolerances and accuracy.

Glass is a superior material for measuring samples with a wide variety of chemical compounds.

Compared to plastic, reusable glass pipets are autoclavable and sustainable with less waste.

These quality pipets offer markings and color coding that are permanently enameled to the glass.

Volumetric Pipets – To Deliver

Accurately transfer a specific volume of solution for which it is calibrated.

- Meet ASTM E-969 Class A Specifications and USP Standards for volumetric glassware

VOLUMETRIC PIPETS						
Cat. No.	Capacity (mL)	Tolerance (\pm mL)	Approx. Length (mm)	Color Code	Pack Qty.	Case Qty.
2040A-05	0.5	0.005	300	2-Black	12	72
2040A-1	1.0	0.006	345	Blue	12	72
2040A-2	2.0	0.006	355	Orange	12	72
2040A-3	3.0	0.01	360	Black	12	72
2040A-4	4.0	0.01	365	2-Red	12	72
2040A-5	5.0	0.01	375	White	12	72
2040A-6	6.0	0.01	390	2-Orange	12	72
2040A-7	7.0	0.01	410	2-Green	12	72
2040A-8	8.0	0.02	430	Blue	12	72
2040A-10	10.0	0.02	440	Red	12	72
2040A-13	13.0	0.03	460	White	6	36
2040A-15	15.0	0.03	460	Green	6	36
2040A-20	20.0	0.03	475	Yellow	6	36
2040A-25	25.0	0.03	480	Blue	6	36
2040A-50	50.0	0.05	540	Red	6	36
2040A-100	100.0	0.08	600	Yellow	6	36

Volumetric Pipets - Wide-Tip Opening – To Deliver

Ideal for water treatment facilities, winemakers, tissue culture work and essential oil testing

- Meet ASTM E-969 Class B Specifications for tolerance
- Wide tip opening facilitates rapid fill and drain of viscous liquids, slurries and suspensions
- No drawn tips on 1, 2 & 5mL sizes. Standard drawn tips on 10 – 100mL sizes

VOLUMETRIC PIPETS - WIDE-TIP OPENING						
Cat. No.	Capacity (mL)	Tolerance (\pm mL)	Approx. Length (mm)	Approx. Tip I.D. (mm)	Pack Qty.	Case Qty.
2040-1-1.9MM	1.0	0.01	320	1.9	12	72
2040-2-2.4MM	2.0	0.01	330	2.4	12	72
2040-5-3MM	5.0	0.02	346	3.0	12	72
2040-10-3MM	10.0	0.02	440	3.0	12	72
2040-20-3MM	20.0	0.03	478	3.0	6	36
2040-25-3MM	25.0	0.03	475	3.0	6	36
2040-50-3MM	50.0	0.05	538	3.0	6	36
2040-100-3MM	100.0	0.10	605	3.0	6	36



Serological Pipets

Graduated with calibration marks for delivering variable volumes of solution as needed

Mohr Measuring Pipets – To Deliver, DRAIN OUT

- Meet ASTM E-1293 Style 1, Class A Specifications and USP Standards for volumetric glassware

MOHR MEASURING PIPETS							
Cat. No.	Capacity (mL)	Tolerance (\pm mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Color Code	Pack Qty.	Case Qty.
2010A-5	5.0	0.02	0.1	8 x 365	Blue	12	72
2010A-10	10.0	0.03	0.1	10 x 370	Orange	12	72
2010A-25	25.0	0.05	0.1	13 x 455	White	12	72

Serological Pipets – To Deliver, BLOW OUT

- Meet ASTM E-1044 Style 1, Class A Specifications

SEROLOGICAL PIPETS							
Cat. No.	Capacity (mL)	Tolerance (\pm mL)	Graduation Interval (mL)	Approx. O.D. x Height (mm)	Color Code	Pack Qty.	Case Qty.
2011A-01-C	0.1	0.0025	0.01	6 x 300	White	12	72
2011A-1-C	1.0	0.01	0.01	7 x 360	Yellow	12	72
2011A-2-D	2.0	0.01	0.1	7 x 360	Green	12	72
2011A-5	5.0	0.02	0.1	8 x 365	Blue	12	72
2011A-10	10.0	0.03	0.1	10 x 370	Orange	12	72
2011A-25	25.0	0.05	0.1	13 x 455	White	12	72

Serological Pipets-Wide-Tip Opening – To Deliver, BLOW OUT

Ideal for biochemical applications

SEROLOGICAL PIPETS - WIDE-TIP							
Cat. No.	Capacity (mL)	Tolerance (\pm mL)	Graduation Interval (mL)	Hole Diameter x Length (mm)	Color Code	Pack Qty.	Case Qty.
20200-11A	1.0	0.02	0.2	1.5 x 350	Red	12	72
20200-51A	5.0	0.1	0.5	2.0 x 350	Blue	12	72
20200-101A	10.0	0.2	0.5	3.0 x 350	Orange	12	72
SEROLOGICAL PIPETS - GRADUATED TO THE TIP							
20140-10A	10	0.05	0.1	1.4 x 366	-----	12	72
20140-20A	20	0.1	0.1	1.5 x 435	-----	12	72

Transfer Pipets

One-piece, unbreakable polyethylene plastic pipettes

Well-suited for blood banking, urinalysis, hematology, wet chemistry, microbiology, and serology

- Bulk packed versions come in handy dispenser box
- Sterile versions available single wrapped or 20 wrapped at a time
- Lot-to-lot traceability on sterile versions

STERILE **R**

TRANSFER PIPETS

	Cat. No.	Vol. (mL)	Working Vol. (mL)	Length (mm)	Graduations (mL)	Packaging 500 per box	Sterile
a	20327-05	1	0.5	60	-	Bulk	✓
	20327-1	5	1	150	0.25	Bulk	
b	20327-1SB	5	1	150	0.25	20/bag	✓
	20327-1S	5	1	150	0.25	1/single wrap	✓
c	20327-2	5	2	155	0.5	Bulk	
	20327-2SB	5	2	155	0.5	20/bag	✓
	20327-2S	5	2	155	0.5	1/single wrap	✓
d	20327-3	7	3	155	0.5	Bulk	
	20327-3SB	7	3	155	0.5	20/bag	✓
	20327-3S	7	3	155	0.5	1/single wrap	✓



Pipet Racks

Keep your pipets organized and protected with these Pipet Racks. Four angled shelves allow you to sort your glass and plastic pipets. Stores pipets with a length up to 300 mm; will work up to lengths approximately 450 mm, but pipet will extend past the end of the rack.



Acrylic – Heavy-duty clear acrylic gives you an easy view of the pipets for quick identification.



ABS – Features cutouts on the sides for visibility of pipets. Includes two removable attachments that hold pipet bulbs, fillers, or pumps. Keyhole mounts on the side allow mounting to a surface.



ABS w/magnets – same as other ABS racks; also includes strong magnets on either side for mounting the rack to a steel surface for bench space management.

PIPET RACKS

Cat. No.	Material	Color	Dimensions (L x W x H)	
			Inches	Centimeters
30101	Acrylic	Clear	11.4 x 3.5 x 15.8	29.1 x 8.8 x 40.1
30102	ABS	Blue		
30103	ABS	Red		
30104	ABS w/magnets	Blue		

Universal Carousel Pipette Stand

Great for labs with multiple types of pipettes, these Universal Carousel Pipette Stands hold up to 8 single-channel pipettes, 4 multi-channel pipettes, or a combination of both.

Add or remove inserts from the upper holder to accommodate different sized pipettes. Features a rotating head for easy pipette selection, ABS construction for chemical resistance, weighted base for stability, and top handle to easily move the stand where you need it.

Color code your pipette location with the blue/green color combination; or choose the assorted colors (Purple, Yellow, Red, Orange, Green, Grey, Clear, and Blue) for even more customization.

Cat. No.	Color	Dimensions (L x W x H)	
		Inches	Centimeters
30120	Blue/Green	6.2 x 9 x 16.1	15.8 x 22.9 x 40.8
30121	Assorted/Clear		



Manual Polarimeter

Rugged design and simple operation allows for heavy use at the instructional level

- Polarimeters are used to measure the purity of ingredients in pharmaceuticals, quality control of raw materials, and concentration of ingredients in sugar-based substances
- The model C25L Polarimeter is designed to measure the angle of rotation caused by passing polarized light through an optically active substance
- Adjustable eyepiece brings the 2 half shadows of your sample into sharp focus
- When the 2 half shadows are viewed, right-side shading indicates a dextrorotatory sample and left-side shading indicates a levorotatory sample
- With the Vernier scale, rotations can be measured to an accuracy of $\pm 0.1^\circ$
- Includes 100 mm and 200 mm sample cells with bubble trap



4601P



4600P-SC200, 200 mm, 18 mL



4600P-SC100, 100 mm, 11 mL

MANUAL POLARIMETER

Cat. No.	Measuring Range	Resolution	Accuracy	Light Source	Dimension (L x W x H)	Weight	Power
4601P	$\pm 180^\circ$	0.1°	$\pm 0.1^\circ$	LED with 589 nm filter	460 x 140 x 330 mm	11.5 lbs / 5.2 kg	110 VAC

REPLACEMENT PARTS

Cat. No.	Description
4600P-SC100	100 mm sample cell
4600P-SC200	200 mm sample cell
1200-FS4	Fuse, 1A, 250V

VEE GEE's benchtop and handheld refractometers provide users with highly accurate readings for a wide range of applications in the agricultural, food & beverage, chemical and manufacturing industries.

We offer a large breadth of scales for specific applications such as Brix, NaCl, Salinity, Specific Gravity of Seawater, Coolant, Battery Acid, and more.

X-Series Handheld Refractometers

Compact & Portable

The X-Series handheld refractometers are exceptionally simple to operate and provide quick, accurate measurements for the concentration of nearly any aqueous solution in a wide range of applications.

Made durable with industrial-grade design features to provide years of reliable use even in the field. Rugged metal housing construction with slip-resistant rubber grip and a Non-Roll stand to protect from rolling off surfaces.

No need to recalibrate or apply correction factors in work environments with large temperature swings with the Automatic Temperature Compensation (ATC) feature included on Models BTX-1, BTX-20, STX-3, CTX-1 & CTX-2. The effective compensation range is 10-30° C.

X-SERIES SPECIFICATIONS

Sample Type	Transparent and Translucent
Sample Quantity	>0.1 mL
Prism	Optical Glass
Prism Housing	Copper Alloy w/Nickel-Chrome Coating
Included	Carrying Case, Plastic Transfer Pipet, Instruction Manual
Warranty	1 Year

Our portable line of optical and digital refractometers offers the convenience to perform sample analysis where and when you need. With added temperature control, our Abbe benchtop unit takes the accuracy of your Brix/Refractive Index analysis to the next level in the laboratory.

X-Series Handheld Refractometers

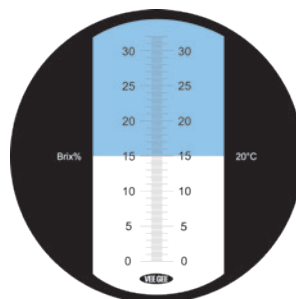


Protective Grip

The rubber grip reduces hand slipping and guards against user's hand heat to maintain accuracy

Tool-Free Calibration

Tools not required with our patented "Zero-Ring" calibration (non ATC units only)



Accurate & Sharp Readings

Large scale is best in class delivering clear, sharp figures, screen shading and incredible contrast for overall accuracy

Quick Results

High quality optical glass prism and all-metal housing design allows the sample and prism to reach temperature equilibrium quickly

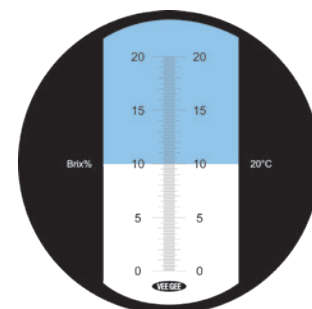
Keep your Refractometer and testing supplies securely together and at hand with our DuraPorter, Portable Transfer Box *pg. 50*



X-Series Handheld Refractometers

For Food, Beverage, and Agriculture Applications

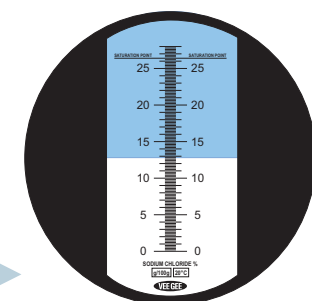
BRIX HANDHELD REFRACTOMETERS							
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy	ATC	Length
43001	BX-1	Brix	0 to 32%	0.2%	±0.2% Brix	No	165 mm
43002	BTX-1	Brix	0 to 32%	0.2%	±0.2% Brix	Yes	165 mm
43003	BX-2	Brix	28 to 62%	0.2%	±0.2% Brix	No	150 mm
43005	BX-3	Brix	60 to 92%	0.2%	±0.2% Brix	No	140 mm
43007	BX-4	Brix	45 to 82%	0.2%	±0.2% Brix	No	140 mm
43009	BX-10	Brix	0 to 10%	0.1%	±0.1% Brix	No	185 mm
43011	BX-20	Brix	0 to 20%	0.1%	±0.1% Brix	No	185 mm
43012	BTX-20	Brix	0 to 20%	0.1%	±0.1% Brix	Yes	185 mm
43015	BX-50	Brix	0 to 50%	0.5%	±0.5% Brix	No	145 mm



Cat No. 43012/Model BTX-20
For specific scale images, visit product on our website.

For Water/Wastewater, Aquatic and Aquaculture Applications

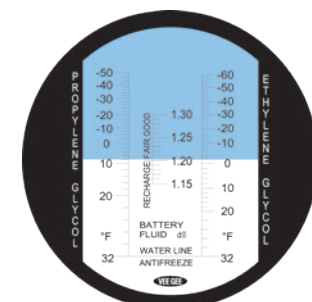
SODIUM CHLORIDE AND SALINITY HANDHELD REFRACTOMETERS							
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy	ATC	Length
43033	SX-1	NaCl	0 to 10%	0.1%	±0.1%	No	185 mm
43035	SX-2	NaCl	0 to 28%	0.2%	±0.2%	No	165 mm
43036	STX-3	Salinity	0 to 100 ppt	1.0 ppt	±1.0 ppt	Yes	185 mm
		Specific Gravity of Seawater	1.000 to 1.070	0.001	±0.001		



Cat No. 43035/Model SX-3
For specific scale images, visit product on our website.

For Light Industrial, Chemical, and Automotive Applications

GENERAL PURPOSE AND INDUSTRIAL CHEMICAL HANDHELD REFRACTOMETERS							
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy	ATC	Length
43055	NDX-2	Refractive Index	1.435 to 1.520	0.001	±0.001	No	140 mm
43062	CTX-1	Propylene Glycol Freezing Point	-50 to 0°C	1°C	±1°C	Yes	150 mm
		Ethylene Glycol Freezing Point	-50 to 0°C	1°C	±1°C		
		Battery Acid Specific Gravity	1.10 to 1.40	0.01	±0.01		
43064	CTX-2	Propylene Glycol Freezing Point	-50 to 32°F	2°F	±2°F	Yes	150 mm
		Ethylene Glycol Freezing Point	-60 to 32°F	2°F	±2°F		
		Battery Acid Specific Gravity	1.10 to 1.40	0.01	±0.01		
43071	URX-60	Urea	0 to 60%	0.5%	±0.5%	No	145 mm



Cat No. 43064/Model CTX-2
For specific scale images, visit product on our website.

ACCESSORIES		
Cat. No.	Model No.	Model
43000-DLXXX	Daylight Plate Kit	X-Series Handheld Refractometers
43RP-08	Soft Fabric Carrying Case	X-Series Handheld Refractometers
1111	Soft Vinyl Carrying Case	BX-1, BTX-1, BX-2, BX-3, BX-4, BX-50, SX-2, NDX-2, CTX-1, CTX-2
1111L	Soft Vinyl Carrying Case	BX-10, BX-20, BTX-20, SX-1, STX-3



Cat No. 43000-DLXXX
Daylight Plate Kit

MDX-Series

Digital Refractometers

Compact, Durable and Accurate

The MDX-Series Digital Refractometers feature IP65/67 ratings making them ideal for use in the field and in a multitude of environments.

Delivering quick, digital accuracy with high-end performance features like:

- Automatic Temperature Compensation (ATC)
- Continuous Loop Average Readings



Intuitive to Use

Easy operation with large readable digital LCD display that shows all data needed on screen



Quick Results

Simply place 4-5 drops of your sample into the well, close the prism cover, and press the "READ" button



Easy to Clean

Prism cover and rubber grip surround not only add extra protection, they are removable for easy cleaning

MDX-SERIES SPECIFICATIONS

ATC Range	32 to 104°F / 0 to 40°C
IP Rating	IP67: detecting unit IP65: body
Prism	Optical Glass
Wavelength	589.3 nm LED
Sample Cell	Stainless Steel
Calibration Solution	Distilled Water (not included)
Min. Sample Volume	0.3 mL
Battery	1 X AAA, 1.5V
Dimensions	121 x 58 x 25 mm
Weight	90 g
Included	Hard shell case with protective lining, disposable pipette, (1) AAA Battery, and user manual
Warranty	1-Yr Parts and Labor

Need additional Transfer Pipettes? *pg. 20*



MDX-Series Digital Refractometers

For Food, Beverage, and Agriculture Applications

DIGITAL BRIX/SUGAR REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48101	MDX-101	Brix	0.0 to 50.0% Brix	0.1% Brix	±0.2% Brix
		Refractive Index	1.3330 to 1.4200 nD	0.0001 nD	±0.0003 nD
48102	MDX-102	Brix	0.0 to 90.0% Brix	0.1% Brix	±0.2% Brix
		Refractive Index	1.3330 to 1.5300 nD	0.0001 nD	±0.0003 nD
48103	MDX-103	Dextran	0.0 to 10.5%	0.1%	±0.2%
		Fructose	0.0 to 68.0%	0.1%	±0.2%
		Glucose	0.0 to 59.0%	0.1%	±0.2%
		Lactose	0.0 to 16.5%	0.1%	±0.2%
		Maltose	0.0 to 15.5%	0.1%	±0.2%
		Sucrose (Brix)	0.0 to 90.0%	0.1%	±0.2%

DIGITAL HONEY REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48301	MDX-301	Brix	0.0 to 90.0% Brix	0.1% Brix	±0.2% Brix
		Moisture	5.0 to 38.0%	0.1%	±0.2%
		Baume	33.0 to 48.0°	0.1°	±0.2°
		Refractive Index	1.3330 to 1.5300 nD	0.0001 nD	±0.0003 nD

DIGITAL WINE REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48401	MDX-401	Brix	0.0 to 50.0% Brix	0.1% Brix	±0.2% Brix
		PA (% v/v)	0.0 to 22.0%	0.1%	±0.2%
		Oechsle (Oe)	0 to 150°	1°	±2°
		KMW (Babo)	0.0 to 25.0°	0.1°	±0.2°

For Water/Wastewater, Aquatic and Aquaculture Applications

DIGITAL SODIUM CHLORIDE REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48201	MDX-201	NaCl (%)	0.0 to 28.0%	0.1%	±0.2%
		NaCl (ppt)	0 to 280 ppt	1 ppt	±2 ppt
		Specific Gravity	1.000 to 1.217	0.001	±0.002
		Refractive Index	1.3330 to 1.4200 nD	0.0001 nD	±0.0003 nD

DIGITAL SEAWATER REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48202	MDX-202	Salinity	0 to 100 ppt	1 ppt	±2 ppt
		Chlorinity	0 to 57 ppt	1 ppt	±2 ppt
		Specific Gravity	1.000 to 1.075	0.001	±0.002
		Refractive Index	1.3330 to 1.4200 nD	0.0001 nD	±0.0003 nD

For Light Industrial, Chemical, and Automotive Applications

DIGITAL DEF (UREA)/BATTERY ACID REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48602	MDX-602	DEF (Urea)	0.0 to 51.0%	0.1%	±0.2%
		Refractive Index	1.3330 to 1.4200 nD	0.0001 nD	±0.0003 nD
		Battery Acid Specific Gravity	1.000 to 1.500	0.001	±0.005

DIGITAL COOLANT REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
48603	MDX-603	Ethylene Glycol (% v/v)	0.0 to 65.0%	0.1%	±0.5%
		Ethylene Glycol Freezing Point	-80.0 to 32.0°F / -50.0 to 0.0°C	0.1°F / 0.1°C	±1.0°F / ±0.5°C
		Propylene Glycol (% v/v)	0.0 to 73.0%	0.1%	±0.5%
		Propylene Glycol Freezing Point	-100.0 to 32.0°F / -50.0 to 0.0°C	0.1°F / 0.1°C	±1.0°F / ±0.5°C

C10

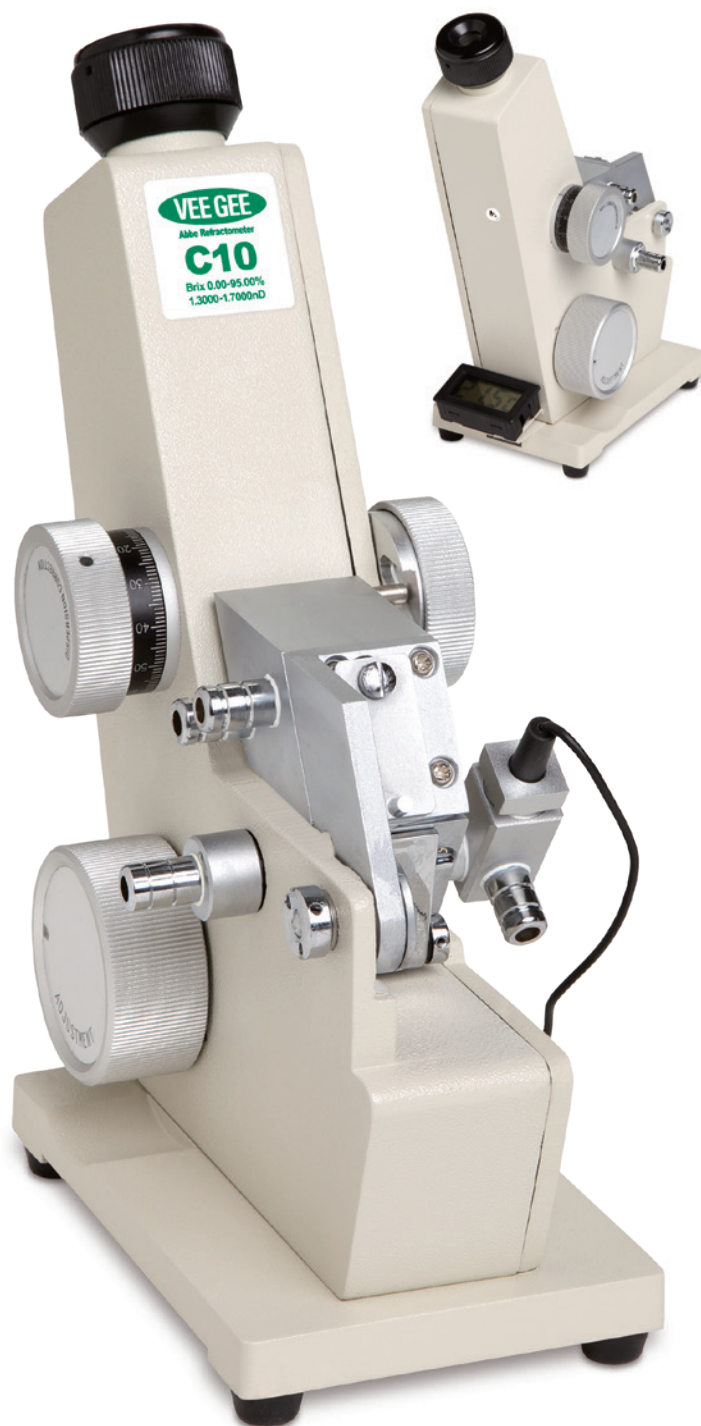
Abbe Refractometer

High Precision Benchtop Unit

The C10 Abbe Refractometer is a high precision benchtop instrument measuring the Refractive Index (nD) of liquids, glass, plastic and film.

With an oversized, easy to read scale and Prism Temperature Control feature, the C10 delivers Brix and Refractive Index Scales and dispersion measurements with high precision.

Made of easy to clean, durable metal housing, the C10 is a long-lasting tool perfect for Education, Food, Beverage and Industrial Laboratories.



C10 ABBE REFRACTOMETER SPECIFICATIONS	
Dispersion (nF-nC)	Dial Readings w/Conversion Charts
Ambient Temperature	5 to 35° C
Measuring Temperature	0 to 70° C
Optical Wavelength	589 nm
Prism	Optical Glass
Prism Housing	SUS316 Stainless Steel
Circulator Nozzles	2 for Primary Prism, 2 for Secondary Prism; accepts 3/8" ID tubing
Dimensions	140 (L) x 90 (W) x 240 (H) mm
Weight	2.3 kg
Supplied With	Digital Thermometer
	Glass Standard (1.5163 nD)
	Bromonaphthalene Contact Liquid (4 mL bottle)
	Scale Adjustment Tool
Warranty	1-Yr Parts and Labor

C10 ABBE REFRACTOMETER					
Cat. No.	Model No.	Scale	Range	Resolution	Accuracy
C10	C10	Brix	0.0 to 95.0%	0.25% Brix	±0.15% Brix
		Refractive Index	1.3000 to 1.7200 nD	0.0005 nD	±0.00025 nD

Refractometer Standards, Letter of NIST Traceability Certification

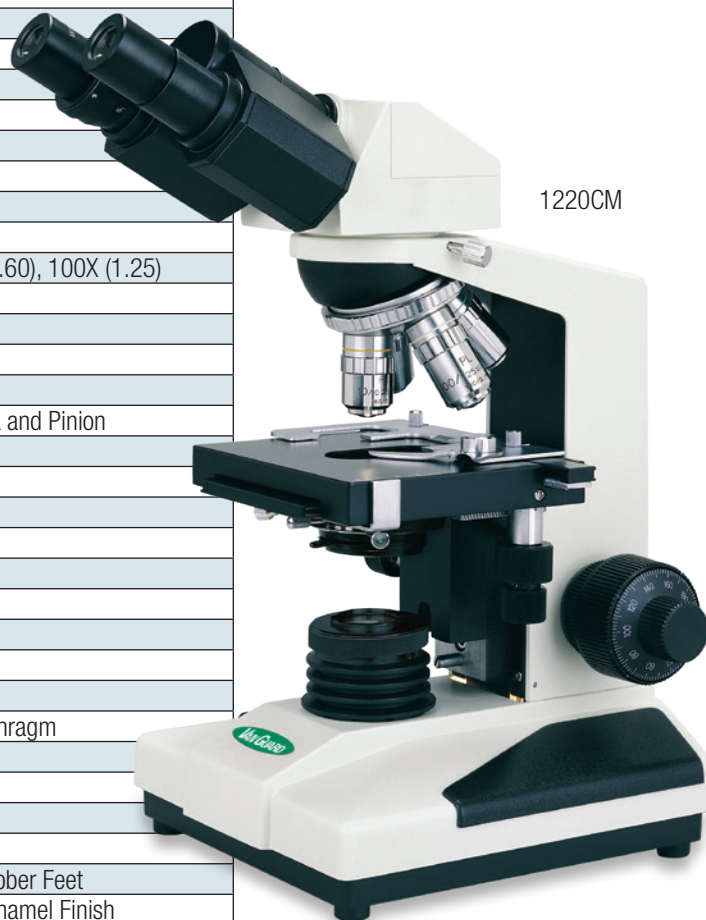
REFRACTOMETER STANDARDS				
Cat. No.	Type	Brix Value (20° C)	R.I. Value (20° C)	Bottle Volume
45000-OS025	Oil	60.00%	1.4420nD	7.4mL/0.25 oz
45000-OS200	Water	0.00%	1.33297nD	7.4mL/0.25 oz

VanGuard 1220CM Compound Microscope

The 1220CM is an economical microscope ideal for use in Education/ University, Medical/Veterinary, and Industrial applications

- The drop-down X-Y stage control is positioned close to the focus control for quick and easy adjustments
- Accessories and parts are available; contact Vee Gee for more information

SPECIFICATIONS		1220CM
Optical System		Fixed 160 mm
Viewing Head	Type	Binocular (Seidentopf)
	Tube Inclination	30°
	Rotation	360°
	Interpupillary	55-75 mm
	Dioptric	-5 to +5
Eyepieces	Magnification	10X
	Type	Widefield
	Field Diameter	18 mm
	High-Eyepoint	Yes
	Rubber Eyecups	Yes
Nosepiece	Positions	4
	Pitch	Reverse
Objectives	Illumination Technique	Brightfield
	Type	Achromatic
	Magnification (N.A.)	4X (0.10), 10X (0.25), 40X (0.60), 100X (1.25)
	DIN Standard	Yes
	Type	Mechanical
Stage	Shape	Rectangular
	Dimensions	140 x 110 mm
	X-Y Control	Drop-down, Right Hand, Rack and Pinion
	Cross Travel Range	75 x 40 mm
	Slide Holder	Removable spring clip
	Finish	Chemical Resistant
	Type	Coaxial
Focusing	Controls	Coarse / Fine
	Tension Adjustment	Yes
	Safety Auto-Stop	Yes
	Focusing Range	15 mm
	Precision	0.002 mm
	Type	Abbe 1.25 N.A. with Iris Diaphragm
Condenser	Focusing Control	Rack and Pinion
	Type	20W Variable Quartz Halogen
Illumination	Koehler	Field Diaphragm
	Filter Holder	On Collector
Specifications	Base	210 x 180 mm; Anti-Skid Rubber Feet
	Body	Ergonomic; Stain-Resistant Enamel Finish
	Dimensions (L x W x H)	210 x 180 x 380 mm
	Weight	7.0 kg
	Voltage	110 VAC
Warranty	5-Year Optical/Mechanical; 1-Year Electrical	
Supplied With	Clear Diffusing Filter, Blue Filter, Spare Lamp and Fuses, Dust Cover, and Operation Manual	

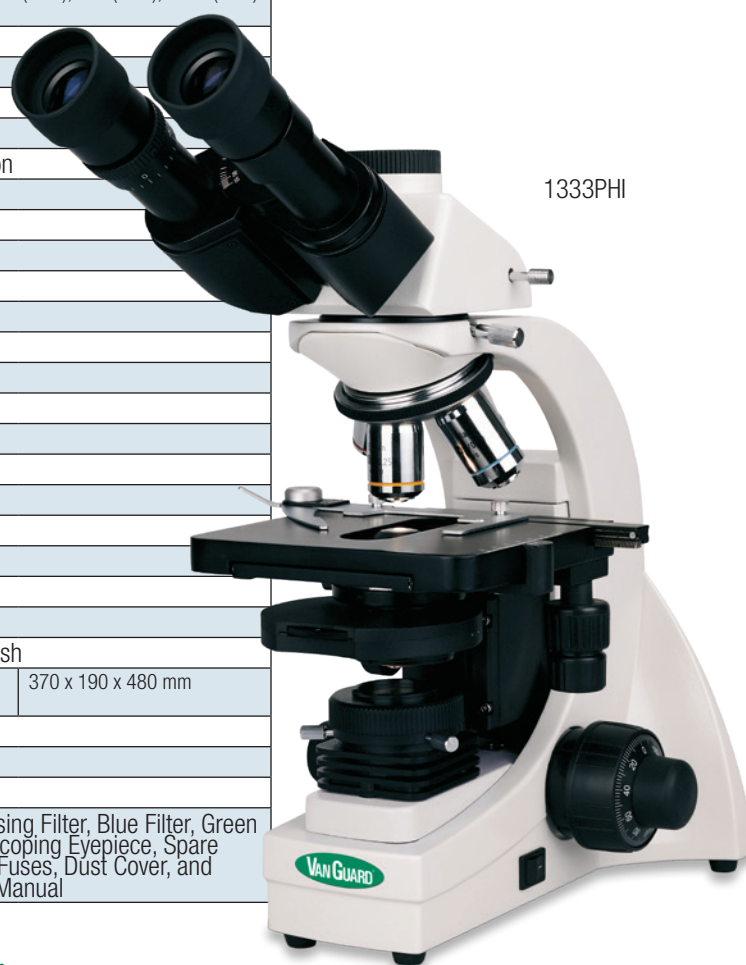


VanGuard 1300-Series Compound Microscopes

Ultra-low focus control, angled viewing head, and interpupillary / dioptic adjustments make this microscope comfortable to use

- The compact frame allows easy arm placement to the controls. Plan objectives provide exceptionally high optical flatness and visual clarity
- Choose from binocular or trinocular viewing heads, and Brightfield or Phase Contrast configurations
- Accessories and parts are available; contact Vee Gee for more information

SPECIFICATIONS		1321BRI	1331BRI	1323PHI	1333PHI
Optical System		VIOS Infinity Corrected			
Viewing Head	Type	Binocular (Seidentopf)	Trinocular (Seidentopf)	Binocular (Seidentopf)	Trinocular (Seidentopf)
	Tube Inclination	30°			
	Rotation	360°			
	Interpupillary	55-75 mm			
	Dioptic	-5 to +5			
Camera Port		N/A	20/80 Spilt	N/A	20/80 Spilt
Eyepieces	Magnification	10X			
	Type	Widefield			
	Field Diameter	20 mm			
	High-Eyepoint	Yes			
	Rubber Eyecups	Yes			
Nosepiece	Positions	4			
	Pitch	Reverse			
Objectives	Illumination	Brightfield		Brightfield / Darkfield / Phase Contrast	
	Type	Plan Achromatic		Plan Phase	
	Magnification (N.A.)	4X (0.10), 10X (0.25), 40X (0.60), 100X (1.25)		10X (0.25), 20X (0.40), 40X (0.60), 100X (1.25)	
	DIN Standard	Yes			
Stage	Type	Mechanical			
	Shape	Rectangular			
	Dimensions	140 x 110 mm			
	X-Y Control	Drop-down, Right Hand, Rack and Pinion			
	Cross Travel Range	75 x 50 mm			
	Slide Holder	Removable spring clip			
	Finish	Chemical Resistant			
Focusing	Type	Coaxial, Low-Position			
	Controls	Coarse / Fine			
	Tension Adjustment	Yes			
	Safety Auto-Stop	Yes			
	Focusing Range	10 mm			
	Precision	0.002 mm			
Condenser	Type	Abbe 1.25 N.A. with Iris Diaphragm			
	Focusing Control	Rack and Pinion			
Illumination	Type	20W Variable Quartz Halogen			
	Koehler	Field Diaphragm			
	Filter Holder	On Collector			
Specifications	Base	225 x 175 mm; Anti-Skid Rubber Feet			
	Body	Ergonomic; Stain-Resistant Enamel Finish			
	Dimensions (L x W x H)	370 x 190 x 400 mm	370 x 190 x 480 mm	370 x 190 x 400 mm	370 x 190 x 480 mm
	Weight	6.5 kg		6.8 kg	
	Voltage	110 VAC			
Warranty	5-Year Optical/Mechanical; 1-Year Electrical				
Supplied With	Clear Diffusing Filter, Blue Filter, Spare Lamp and Fuses, Dust Cover, and Operation Manual			Clear Diffusing Filter, Blue Filter, Green Filter, Telescoping Eyepiece, Spare Lamp and Fuses, Dust Cover, and Operation Manual	

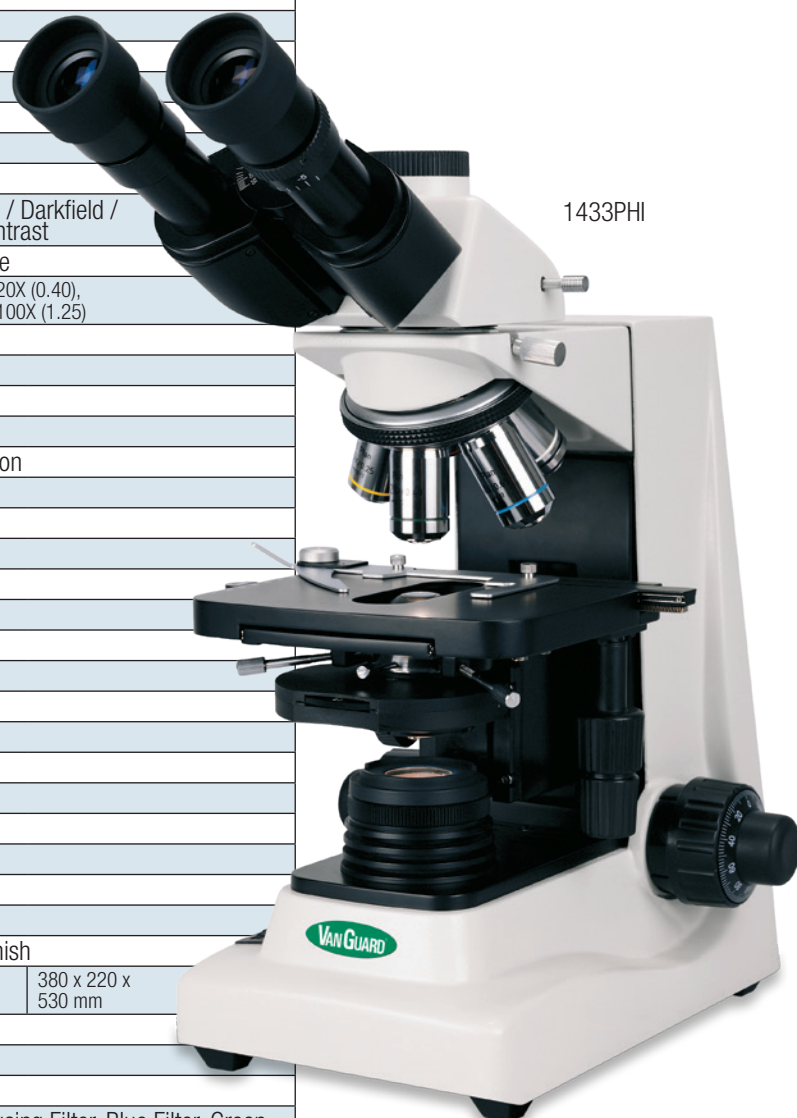


VanGuard 1400-Series Compound Microscopes

Built around a full-size frame, the 1400-Series eliminates the fatigue and strain associated with working long hours over a microscope

- Low-position focusing controls and long drop-down X-Y controls ensure simple, consistent, and comfortable use. Plan objectives provide exceptionally high optical flatness and visual clarity
- Choose from binocular or trinocular viewing heads, and Brightfield or Phase Contrast configurations
- Accessories and parts are available; contact Vee Gee for more information

SPECIFICATIONS		1421BRI	1431BRI	1423PHI	1433PHI
Optical System		VIOS Infinity Corrected			
Viewing Head	Type	Binocular (Seidentopf)	Trinocular (Seidentopf)	Binocular (Seidentopf)	Trinocular (Seidentopf)
	Tube Inclination	30°			
	Rotation	360°			
	Interpupillary	55-75 mm			
	Dioptric	-6 to +6			
Camera Port		N/A	20/80 Spilt	N/A	20/80 Spilt
Eyepieces	Magnification	10X			
	Type	Widefield			
	Field Diameter	20 mm			
	High-Eyepoint	Yes			
Nosepiece	Rubber Eyecups	Yes			
	Positions	5			
Objectives	Pitch	Reverse			
	Illumination	Brightfield		Brightfield / Darkfield / Phase Contrast	
	Type	Plan Achromatic		Plan Phase	
	Magnification (N.A.)	4X (0.10), 10X (0.25), 40X (0.60), 100X (1.25)		10X (0.25), 20X (0.40), 40X (0.60), 100X (1.25)	
Stage	DIN Standard	Yes			
	Type	Mechanical			
	Shape	Rectangular			
	Dimensions	155 x 110 mm			
	X-Y Control	Drop-down, Right Hand, Rack and Pinion			
	Cross Travel Range	75 x 50 mm			
	Slide Holder	Removable spring clip			
Focusing	Finish	Chemical Resistant			
	Type	Coaxial, Low-Position			
	Controls	Coarse / Fine			
	Tension Adjustment	Yes			
	Safety Auto-Stop	Yes			
	Focusing Range	20 mm			
Condenser	Precision	0.002 mm			
	Type	Abbe 1.25 N.A. with Iris Diaphragm			
Illumination	Focusing Control	Rack and Pinion			
	Type	20W Variable Quartz Halogen			
	Koehler	Field Diaphragm			
Specifications	Filter Holder	On Collector			
	Base	260 x 170 mm; Anti-Skid Rubber Feet			
	Body	Ergonomic; Stain-Resistant Enamel Finish			
	Dimensions (L x W x H)	380 x 220 x 425 mm	380 x 220 x 530 mm	380 x 220 x 425 mm	380 x 220 x 530 mm
	Weight	9.0 kg		9.3 kg	
Warranty	Voltage	110 VAC			
		5-Year Optical/Mechanical; 1-Year Electrical			
Supplied With		Clear Diffusing Filter, Blue Filter, Spare Lamp and Fuses, Dust Cover, and Operation Manual		Clear Diffusing Filter, Blue Filter, Green Filter, Telescoping Eyepiece, Spare Lamp and Fuses, Dust Cover, and Operation Manual	

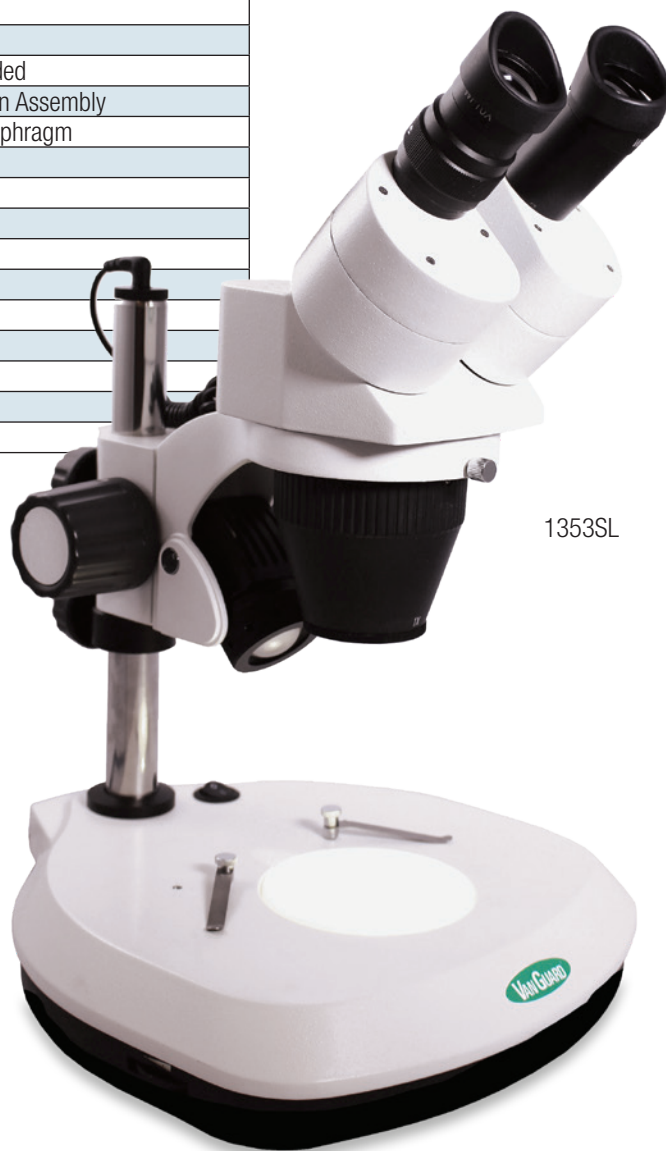


VanGuard 1353SL Stereo Microscope

VanGuard 1353SL Stereo Microscope features precision optics to ensure the highest level of performance for inspection and dissection applications

- Upper and lower LED lighting provides bright and efficient illumination
- Large stage area gives you room to work with bigger objects
- Accessories and parts are available; contact Vee Gee for more information

SPECIFICATIONS		1353SL
Optical System		Fixed 160 mm
Viewing Head	Type	Binocular
	Tube Inclination	45°
	Rotation	360°
	Interpupillary	53-83 mm
	Dioptric	-5 to +5
Eyepieces	Magnification	10X
	Type	Extra Widefield
	Field Diameter	20 mm
	Rubber Eyecups	Yes
Stereo Objectives		1X and 3X
Stage	Plate	Translucent Acrylic
	Clips	Stainless Steel, Spring-Loaded
Focusing Movement		Dual Knobs; Rack and Pinion Assembly
Vertical Travel	Type	Abbe 1.25 N.A. with Iris Diaphragm
	Focusing Control	Rack and Pinion
Illumination	Upper	LED
	Lower	LED
Specifications	Base	290 x 260 mm
	Body	Ergonomic; Stain-Resistant
	Dimensions (L x W x H)	290 x 260 x 500 mm
	Weight	4.5 kg
	Voltage	110 VAC
Warranty	5-Year Optical/Mechanical; 1-Year Electrical	
Supplied With	Eyecups (2), Dust Cover, and Operation Manual	



1353SL

USB Color Digital Microscope Camera Systems

Microscope cameras produce high-definition live images and video for documentation of clinical, life sciences, and material science applications

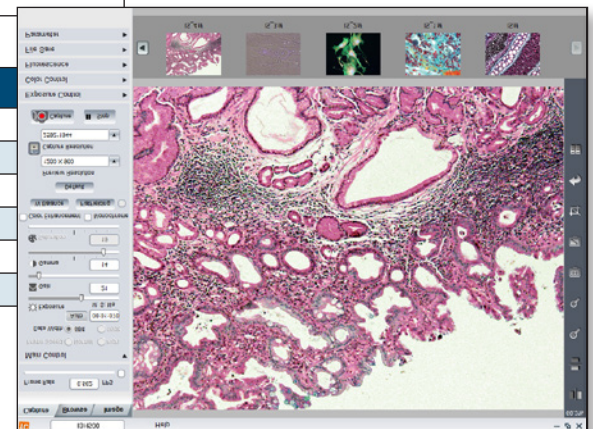
- Cameras feature still and video capture modes, automatic / manual exposure control, manual gamma control, and automatic / manual white balance control
- No separate power cable is required; video, power, and full camera control are all enabled through a single USB cable
- The imaging software allows the user to control all of the advanced settings and has a simple but powerful graphic interface
- Software requires: Windows 7 or later, Intel Core 2 Duo or later, 2 GB of RAM, 2GB hard disk free space, and USB 2.0 / 3.0 port

SPECIFICATIONS	3 MEGAPIXELS	5 MEGAPIXELS	10 MEGAPIXELS
Image Sensor	1/2" CMOS	1/2.5" CMOS	1/2.3" CMOS
Pixel Size	3.2µm x 3.2µm	2.2µm x 2.2µm	1.67µm x 1.67µm
Active Pixels	2048 x 1536	2592 x 1944	3856 x 2764
Frame Rate	2048 1536: 12 fps	2592 x 1944: 5 fps	3856 x 2764: 3 fps
	1024 x 768: 25 fps	1280 x 960: 21 fps	1832 x 1370: 8 fps
	640 x 480: 40 fps	1024 x 768: 25 fps	1280 x 1024: 25 fps
	-----	640 x 480: 38 fps	916 x 680: 28 fps
Sensitivity	1.0 V/Lux-S (550 nm)	0.53 V/Lux-S (550 nm)	0.44 V/Lux-S (550 nm)
Digital Output	24-Bit		
S/N Ratio	> 43 dB	> 40.5 dB	> 40.5 dB
Dynamic Range	54 dB	60 dB	6.5 dB
Capture Mode	Still and Video Color		
Scanning Method	Progressive		
Exposure	Automatic / Manual		
White Balance	Automatic / Manual		
Gamma	Manual		
Interface	USB 2.0 / 3.0		
Specialized Mode	Fluorescence		
Lens Mount	C / CS Mount		
Adapter Lens	0.50X	0.45X	0.45X
Adapters (included)	23 mm, 30 mm, 30.5 mm	23 mm, 30 mm, 30.5 mm	23 mm, 30 mm, 30.5 mm
Twain Compatible	Yes		
Capture Software Suite	Tcapture		
Power	USB 2.0 / 3.0 Bus		
Dimensions (L x W x H)	70 x 85 x 45 mm		
Weight	0.2 kg		
Supplied With	Adapters and USB cable		



1400 CDPC-10

CAT. NO.	CAMERA TYPE	FOR MICROSCOPE MODELS
1400-CDPC-3	USB Digital Camera, 3 Megapixels	1220CM, 1300-Series, 1400-Series
1400-CDPC-5	USB Digital Camera, 5 Megapixels	1220CM, 1300-Series, 1400-Series
1400-CDPC-10	USB Digital Camera, 10 Megapixels	1220CM, 1300-Series, 1400-Series
M1397-K005-1	USB Digital Camera, 3 Megapixels	1353SL
M1397-K007-1	USB Digital Camera, 5 Megapixels	1353SL
M1397-K009-1	USB Digital Camera, 10 Megapixels	1353SL



Tcapture: Camera Software Screen

Microscope Slide Boxes

Durable & Reusable

- Constructed of durable ABS material
- Easy to clean and re-use for multiple projects

Secure & Safe

- Grooved Slots to securely hold slide in place
- Lining material for added cushion against breakage
- Locking feature on outside of box to prevent accidental opening

Systematic

- Multiple identifying features to make labeling and classification simple
- Removable slide inventory sheet included for slide identification

Microscope Slide Box

- Lockable clasp and hinge pins are nickel-plated and rust resistant
- Identification made easy with numbered cork lining corresponding directly to the slide sheet. Outside cover also features an extra labelling area for "Project" and "Date" classification
- Stack multiple boxes with molded in feet to steadily hold for transport or storage



MICROSCOPE SLIDE BOX

Cat. No.	Capacity	Color	Material	Lining	Dimensions (L x W x H)	
					Inches	Centimeters
1400-SLCS201	100 slides	Blue	ABS	Cork	8.2 x 6.9 x 1.3	20.8 x 17.5 x 3.4

Premium Microscope Slide Box Assortment

- All plastic construction eliminates the potential of rust
- Sliding polypropylene lock has extra security feature allowing use of a 2-mm zip tie or security tag (not included)
- Center bar in slide storage area is clearly numbered for easy correspondence to the slide inventory sheet. Assorted colors can be used for additional project coding
- Sold as a pack of five slide boxes with assorted colors: one each of Blue, Orange, Green, Red, and Purple



PREMIUM MICROSCOPE SLIDE BOX

Cat. No.	Capacity	Color	Material	Lining	Dimensions (L x W x H)	
					Inches	Centimeters
1400-SLCS101	100 slides, each box	Blue, Orange, Green, Red, and Purple	Translucent ABS	EVA Foam	8.2 x 7.7 x 1.3	20.7 x 19.5 x 3.2

VEE GEE Hydrometers are manufactured to exacting standards. Each instrument is individually tested and inspected to insure the highest level of dependability, accuracy, and uniformity. Scales include: API, Alcohol, Battery, Baume, Brix, Calcium Chloride, Liquid Petroleum Gas, Plato, Specific Gravity, Sodium Chloride & Soil Analysis.

Hydrometers Explained . . .

The hydrometer is an instrument which is constructed on the Archimedes principle that a solid body displaces its own weight of the liquid in which it floats. Hydrometers can be divided into two general classes; namely for liquid heavier than water and for liquids lighter than water. The base hydrometer scale is Specific Gravity, in which distilled water equals 1.000 as the initial point. Liquids lighter than water are scaled below 1.000 specific gravity and liquids heavier than water are scaled above 1.000 specific gravity.

Many other scales are commonly used, such as API, Brix, Baume, Plato, etc. All of which are convertible into specific gravity by formula.

Hydrometers are usually calibrated at 60°F/60°F. To determine the density of a liquid, the liquid should be at 60°F. If the temperature varies, the liquid will either contract or expand, depending upon the temperature. Therefore, the density fluctuates with the temperature. Where there is a variation from the standard 60°F, corrections must be applied to the hydrometer reading. To assure proper corrections, a separate accurate thermometer should be used, or a hydrometer in combination with a thermometer, which is sometimes referred to as a "thermohydrometer."

The correct method of reading a hydrometer follows:

- Observe a point below the plane of the liquid surface. The surface should appear as an ellipse (Fig. 1).
- The line of vision is raised until the surface, seen first as an ellipse, becomes a straight line (Fig. 2).
- The point at which this line cuts the hydrometer scale is the reading of the instrument (Fig. 3).

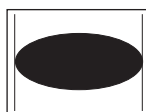


Fig. 1



Fig. 2

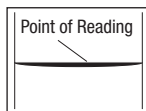


Fig. 3

If the liquid is not sufficiently clear for readings to be made in this manner, read from above the surface and estimate as accurately as possible the point to which the liquid rises on the hydrometer stem. Since hydrometers are calibrated to give correct indications when read at the principal surface of the liquid, correct the reading just taken at the upper edge of the meniscus by an amount equal to this height above the principal surface of the liquid. The amount of correction can be determined with sufficient accuracy for most purposes by taking a few readings on the upper and lower meniscus in a clear liquid of the same character as that being tested and noting the differences.



Alcohol Hydrometers - Tralle and Proof Scales

Verify the alcohol content of distilled spirits

Both models include the same ranges; model 6612-2TS also features an internal thermometer with Safety Blue fill for measuring solution temperature from -10 to +100°F.

- Calibrated for use at 60°F

NOTE: Not for use with beer or wine.

ALCOHOL HYDROMETERS - TRALLE AND PROOF SCALES					
Cat. No.	Range	Subdivisions/ Tolerance	Range	Subdivisions/ Tolerance	Approx. Length (mm)
	TRALLE		PROOF		
6612-1	0 to 100%	1% / ±1%	0 to 200	2 / ±2%	305
6612-2TS	0 to 100%	1% / ±1%	0 to 200	2 / ±2%	355

6612-2TS

Alcohol Hydrometers - Proof Scale, Internal Revenue Service Spec.

Verify the alcohol content of your ethyl alcohol-based spirits with these hydrometers

- Tolerances match those laid out by the Internal Revenue Service specifications
- Calibrated for use at 60°F

ALCOHOL HYDROMETERS - IRS SPECIFICATION					
Cat. No.	Proof Range	IRS Size	Subdivisions	Tolerance	Approx. Length (mm)
6613-B	80 to 120	B	0.5	±0.5%	230
6613-F	0 to 20	F	0.2	±0.3%	305
6613-G	20 to 40	G	0.2	±0.4%	305
6613-H	40 to 60	H	0.2	±0.4%	305
6613-I	60 to 80	I	0.2	±0.3%	305
6613-K	75 to 95	K	0.2	±0.3%	305
6613-L	90 to 110	L	0.2	±0.3%	305
6613-M	105 to 125	M	0.2	±0.3%	305
6613-N	125 to 145	N	0.2	±0.3%	305
6613-P	145 to 165	P	0.2	±0.3%	305
6613-Q	165 to 185	Q	0.2	±0.2%	305
6613-R	185 to 206	R	0.2	±0.2%	305

6613-F

Alcohol Hydrometers w/3-point NIST Certificate and PVC Case-Proof Scale, Internal Revenue Service Specification

Verify the alcohol content of your ethyl alcohol-based spirits with these hydrometers

Tolerances match those laid out by the Internal Revenue Service specifications.

- Commonly used in distilleries requiring certification
- Calibrated for use at 60°F

INCLUDES: Hydrometer, NIST-traceable certificate with 3 data points, and a protective PVC case

ALCOHOL HYDROMETERS W/ NIST CERT. IRS SPECS. & CASE					
Cat. No.	Proof Range	IRS Size	Subdivisions	Tolerance	Approx. Length (mm)
6613-B-C	80 to 120	B	0.5	±0.5%	230
6613-F-C	0 to 20	F	0.2	±0.3%	305
6613-G-C	20 to 40	G	0.2	±0.4%	305
6613-H-C	40 to 60	H	0.2	±0.4%	305
6613-I-C	60 to 80	I	0.2	±0.3%	305
6613-K-C	75 to 95	K	0.2	±0.3%	305
6613-L-C	90 to 110	L	0.2	±0.3%	305
6613-M-C	105 to 125	M	0.2	±0.3%	305
6613-N-C	125 to 145	N	0.2	±0.3%	305
6613-P-C	145 to 165	P	0.2	±0.3%	305
6613-Q-C	165 to 185	Q	0.2	±0.2%	305
6613-R-C	185 to 206	R	0.2	±0.2%	305



Plato Hydrometers with Thermometers

Calibrated to show the concentration of extract as a percentage by weight in brewery wort

For example, a 5°P reading indicates 5 g of extract per 100 g of wort.

- Primarily used in the brewing industry
- Calibrated for use at 20°C

PLATO HYDROMETERS WITH THERMOMETERS						
Cat. No.	Plato Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
6614TS-5	0 to 8.5°	0.1°	360	0 to 50°C	1°C	Spirit
6614TS-6	7.5 to 16°	0.1°	360	0 to 50°C	1°C	Spirit
6614TS-7	15.5 to 24°	0.1°	360	0 to 50°C	1°C	Spirit
6614TS-8	0 to 32°	0.5°	380	30 to 120°F	2°F	Spirit

6614TS-5

API ASTM Hydrometers with Thermometer

Chosen as the Standard Scale for Petroleum

The API Scale was selected as the standard hydrometer scale for petroleum products by the American Petroleum Institute (API), the U.S. Bureau of Mines, and the National Institute of Standards and Technology (NIST).

- The API Scale is based on the following formula: $^{\circ}\text{API} @ 60^{\circ}\text{F} = (141.5/(\text{Specific Gravity at } 60^{\circ}\text{F}) - 131.5$
- The thermometer scale is located in the body of the hydrometer
- Calibrated for use at 60°F

API ASTM HYDROMETERS WITH THERMOMETER							
Cat. No.	ASTM No.	API Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
6752HTS	52H	9 to 21°	0.1°	380	0 to 150°F	2°F	Safety BLUE
6753HTS	53H	19 to 31°	0.1°	380			
6754HTS	54H	29 to 41°	0.1°	380			
6755HTS	55H	39 to 51°	0.1°	380			
6756HTS	56H	49 to 61°	0.1°	380			
6757HTS	57H	59 to 71°	0.1°	380			

6756HTS

Battery Hydrometer - Syphon Set

For Measuring Battery Acid

The Battery Acid Hydrometer Set is used in many industrial settings including, fleet maintenance, automotive services, solar-powered system maintenance, and general industrial applications.

- The rubber parts are made of nitrile rubber, which is chemically inert and durable
- A reinforced box provides storage and is compartmented to eliminate breakage
- Calibrated for use at 77°F

INCLUDES: Specific Gravity Hydrometer, glass syphon tube with rubber bulb, nozzle, and clamp

BATTERY HYDROMETERS				
Cat. No.	Description	Specific Gravity Range	Subdivisions	Approx. Length (mm)
6605-5	Hydrometer and Syphon Set	1.150 to 1.300	0.005	507
6605-5H	Hydrometer Only	1.150 to 1.300	0.005	220
6605-OSY	Glass Syphon, rubber tube, and clamp only	-----	-----	507

6605-5

Baume (Heavy) Hydrometers

These Baume Hydrometers are for liquids heavier than water

- The Baume scale is based on the following formula: $\text{Specific Gravity} = 145/(145 - \text{degrees Baume})$
- Calibrated for use at 60°F

BAUME (HEAVY) HYDROMETERS				BAUME (HEAVY) HYDROMETERS			
Cat. No.	Baume Range	Subdivisions	Length (mm)	Cat. No.	Baume Range	Subdivisions	Length (mm)
6609-1	0 to 12°	0.1°	305	6609-10	0 to 35°	0.5°	305
6609-2	9 to 21°	0.1°		6609-11	0 to 50°	0.5°	
6609-3	19 to 31°	0.1°		6609-12	35 to 70°	0.5°	
6609-4	29 to 41°	0.1°		6609-13	0 to 50°	1.0°	
6609-5	39 to 51°	0.1°		6609-14	0 to 70°	1.0°	
6609-8	0 to 15°	0.1°		6609-15	0 to 90°	1.0°	
6609-9	0 to 25°	0.2°					

6609-1

Brix Hydrometers

Brix Hydrometers are calibrated to show the percentage of sucrose by weight at 20°C

The Brix scale is based on the following: 1°Brix = 1% sucrose by weight at the specified temperature (20°C)

BRIX HYDROMETERS				BRIX HYDROMETERS			
Cat. No.	Brix Range	Subdivisions	Approx. Length (mm)	Cat. No.	Brix Range	Subdivisions	Approx. Length (mm)
6601-1	0 to 12°	0.1°	330	6601-10	0 to 35°	0.5°	330
6601-2	9 to 21°	0.1°	330	6601-11	35 to 70°	0.5°	330
6601-3	19 to 31°	0.1°	330	6601-13	-5 to 5°	0.1°	330
6601-4	29 to 41°	0.1°	330	6601-14	5 to 15°	0.1°	330
6601-5	39 to 51°	0.1°	330	6601-15	15 to 25°	0.1°	330

6601-15



Brix Hydrometers with °C Thermometers

Brix Hydrometers are calibrated to show the percentage of sucrose by weight at 20°C

The Brix scale is based on the following: 1°Brix = 1% sucrose by weight at the specified temperature (20°C).

- The thermometer includes a correction scale printed opposite the temperature scale for conversion of the reading to 20°C

BRIX HYDROMETERS WITH °C THERMOMETERS						
Cat. No.	Brix Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
6601TS-1	0 to 12°	0.1°	370	0 to 50°C	1°C	Safety BLUE
6601TS-2	9 to 21°	0.1°	370			
6601TS-3	19 to 31°	0.1°	370			
6601TS-4	29 to 41°	0.1°	370			
6601TS-5	39 to 51°	0.1°	370			
6601TS-6	49 to 61°	0.1°	370			
6601TS-8	69 to 81°	0.1°	370			
6601TS-10	0 to 35°	0.5°	370			
6601TS-12	0 to 70°	1.0°	370			
6601TS-13	-5 to 5°	0.1°	370			
6601TS-14	5 to 15°	0.1°	370			
6601TS-15	15 to 25°	0.1°	370			

6601TS-2



Brix Hydrometers with °F Thermometers

Brix Hydrometers are calibrated to show the percentage of sucrose by weight at 68°F

The Brix scale is based on the following: 1°Brix = 1% sucrose by weight at the specified temperature (68°F).

- The thermometer includes a correction scale printed opposite the temperature scale for conversion of the reading to 68°F

BRIX HYDROMETERS WITH °F THERMOMETERS						
Cat. No.	Brix Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
6601TS-1F	0 to 12°	0.1°	370	30 to 130°F	2°F	SafetyBLUE
6601TS-2F	9 to 21°	0.1°	370			
6601TS-3F	19 to 31°	0.1°	370			
6601TS-10F	0 to 35°	0.5°	370			
6601TS-13F	-5 to 5°	0.1°	370			

6601TS-1F



Calcium Chloride (CaCl₂) Specific Gravity/Freezing Point Hydrometer

This hydrometer measures the specific gravity and freezing point of calcium chloride in solution

- Calibrated for use at 60°F

CALCIUM CHLORIDE (CaCl ₂) SPECIFIC GRAVITY/FREEZING POINT HYDROMETER			
Cat. No.	Range	Subdivisions	Approx. Length (mm)
6611-3	1.000 to 1.280 Specific Gravity	0.002	305
	+30 to -40°F Freezing Point	5°	

6611-3

Sodium Chloride Hydrometers

Measure the percentage of sodium chloride in solution with these hydrometers

Model 6611-1 measures the % saturation of sodium chloride in solution; Model 6611-2 measures the % by weight of sodium chloride in solution.

- Calibrated for use at 60°F

SODIUM CHLORIDE HYDROMETERS			
Cat. No.	Range	Subdivisions	Approx. Length (mm)
6611-1	0 to 100% saturation	1.0%	305
6611-2	0 to 26.5% by weight	0.5%	305

6611-1

Specific Gravity, also known as relative density, is the ratio of the mass of a liquid to the mass of an equal volume of distilled water.

Ultra-Precision Specific Gravity Hydrometers

Featuring smaller ranges and higher resolution, with subdivisions of 0.0005

- Calibrated for use at 60°F

ULTRA-PRECISION SPECIFIC GRAVITY HYDROMETERS			
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
6602-2	0.700 to 0.770	0.0005	330
6602-3	0.760 to 0.830	0.0005	330
6602-4	0.820 to 0.890	0.0005	330
6602-5	0.880 to 0.950	0.0005	330
6602-6	0.940 to 1.010	0.0005	330
6602-7	1.000 to 1.070	0.0005	330
6602-8	1.060 to 1.130	0.0005	330
6602-9	1.120 to 1.190	0.0005	330
6602-10	1.180 to 1.250	0.0005	330
6602-11	1.240 to 1.310	0.0005	330
6602-12	1.300 to 1.370	0.0005	330
6602-13	1.360 to 1.430	0.0005	330
6602-14	1.420 to 1.490	0.0005	330
6602-15	1.480 to 1.550	0.0005	330
6602-19	1.720 to 1.790	0.0005	330

6602-7

Precision Specific Gravity Hydrometers

Precision Specific Gravity Hydrometers feature subdivisions from 0.001 to 0.01

- Calibrated for use at 60°F

PRECISION SPECIFIC GRAVITY HYDROMETERS			
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
6603-10	0.700 to 0.810	0.001	305
6603-11	0.800 to 0.910	0.001	305
6603-12	0.900 to 1.000	0.001	305
6603-1	1.000 to 1.220	0.002	305
6603-2	1.200 to 1.420	0.002	305
6603-3	1.400 to 1.620	0.002	305
6603-4	1.600 to 1.820	0.002	305
6603-5	1.800 to 2.020	0.002	305
6603-21	2.200 to 2.420	0.002	305
6603-22	2.400 to 2.620	0.002	305
6603-13	0.650 to 1.000	0.005	305
6603-6	1.000 to 1.600	0.005	305
6603-7	1.000 to 2.000	0.010	305
6603-8	2.000 to 3.000	0.010	305
6603-9	3.000 to 4.000	0.010	305

6603-1



Precision Specific Gravity Hydrometers with Thermometer

No need for a separate thermometer to check liquid temperature

- These Hydrometers feature an internal thermometer for calculating temperature corrections
- Calibrated for use at 60°F

PRECISION SPECIFIC GRAVITY HYDROMETERS WITH THERMOMETER						
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
6602TS-7	1.000 to 1.070	0.001	385	20 to 150°F	2°F	SafetyBLUE
6602TS-8	1.060 to 1.130	0.001	385			
6603TS-1	1.000 to 1.220	0.002	305			

6602TS-7



Precision Short-Form Specific Gravity Hydrometers

Short-Form Hydrometers use less volume of the test liquid, while still offering 0.001 resolution

- Calibrated for use at 60°F

PRECISION SHORT-FORM SPECIFIC GRAVITY HYDROMETERS			
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
6602-4S	0.820 to 0.890	0.001	165
6602-5S	0.880 to 0.950	0.001	165
6602-6S	0.940 to 1.010	0.001	165
6602-7S	1.000 to 1.070	0.001	165
6602-8S	1.060 to 1.130	0.001	165
6602-9S	1.120 to 1.190	0.001	165
6602-10S	1.180 to 1.250	0.001	165

6602-7S



ASTM Specific Gravity Hydrometers

Manufactured to the specifications of the American Society for Testing and Materials (ASTM)

Select the hydrometer that you need by matching the ASTM number shown in the table.

- Calibrated for use at 60°F

ASTM SPECIFIC GRAVITY HYDROMETERS				
Cat. No.	ASTM No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
67111H	111H	1.000 to 1.050	0.0005	330
67112H	112H	1.050 to 1.100	0.0005	330
67113H	113H	1.100 to 1.150	0.0005	330
67114H	114H	1.150 to 1.200	0.0005	330
67115H	115H	1.200 to 1.250	0.0005	330
67116H	116H	1.250 to 1.300	0.0005	330
67117H	117H	1.300 to 1.350	0.0005	330
67118H	118H	1.350 to 1.400	0.0005	330
67119H	119H	1.400 to 1.450	0.0005	330
67120H	120H	1.450 to 1.500	0.0005	330

ASTM SPECIFIC GRAVITY HYDROMETERS				
Cat. No.	ASTM No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
67125H	125H	1.000 to 1.050	0.001	260
67126H	126H	1.050 to 1.100	0.001	260
67127H	127H	1.100 to 1.150	0.001	260
67128H	128H	1.150 to 1.200	0.001	260
67129H	129H	1.200 to 1.250	0.001	260
67130H	130H	1.250 to 1.300	0.001	260
67131H	131H	1.300 to 1.350	0.001	260
67132H	132H	1.350 to 1.400	0.001	260
67133H	133H	1.400 to 1.450	0.001	260
67134H	134H	1.450 to 1.500	0.001	260

67125H



Wide-Range Specific Gravity Hydrometers

Ideal when you aren't sure of the approximate value of your liquid

- Also use for multiple liquids with different specific gravity within the range of the hydrometer, allowing multiple uses with one unit
- Calibrated for use at 60°F

WIDE-RANGE SPECIFIC GRAVITY HYDROMETERS			
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
6604-1	1.000 to 1.250	0.005	165
6604-2	1.200 to 1.450	0.005	165
6604-3	1.400 to 1.650	0.005	165
6604-4	1.600 to 1.850	0.005	165
6604-5	1.800 to 2.050	0.005	165

6604-1



Universal Specific Gravity Hydrometer

Ideal when you aren't sure of the approximate value of your liquid

This dual-scale model measures specific gravity and Baume. Also use for multiple liquids with different readings, allowing multiple uses with one hydrometer.

- Calibrated for use at 60°F

UNIVERSAL SPECIFIC GRAVITY HYDROMETER					
Cat. No.	Specific Gravity Range	Subdivisions	Baume Range	Subdivisions	Approx. Length (mm)
6605-1	0.700 to 2.000	0.005 (from 0.7 to 1.0); 0.01 (from 1.0 to 2.0)	0 to 72° (Heavy); 70 to 10° (Light)	1°	380

6605-1



Dual Scale Specific Gravity / Baume Hydrometers

Dual-Scale Hydrometers have two scales on the stem, covering different applications in one unit

The Baume scale has two different scales: one for liquids heavier than water and one for liquids lighter than water. See table below for Baume ranges.

- Calibrated for use at 60°F

DUAL SCALE SPECIFIC GRAVITY / BAUME HYDROMETERS				
Cat. No.	Specific Gravity Range	Baume Range	Subdivisions	Approx. Length (mm)
6603DS-1	1.000 to 1.220	0 to 26° (Heavy)	0.002 / 0.2°	305
6603DS-1S	1.000 to 1.225	0 to 26° (Heavy)	0.005 / 1°	305
6603DS-2	1.200 to 1.420	24 to 42° (Heavy)	0.002 / 0.2°	305
6603DS-2S	1.200 to 1.425	24 to 42° (Heavy)	0.005 / 1°	305
6603DS-3	1.400 to 1.620	42 to 55° (Heavy)	0.002 / 0.2°	305
6603DS-4	1.600 to 1.820	55 to 65° (Heavy)	0.002 / 0.2°	305
6603DS-5	1.800 to 2.020	64 to 72° (Heavy)	0.002 / 0.2°	305
6603DS-6	1.000 to 1.450	0 to 45° (Heavy)	0.005 / 0.5°	305
6603DS-6S	1.000 to 1.400	0 to 41° (Heavy)	0.010 / 1°	305
6603DS-7	1.000 to 2.000	0 to 72° (Heavy)	0.010 / 1°	305
6603DS-13	0.600 to 1.000	10 to 100° (Light)	0.005 / 1°	305
6603DS-04	0.70 to 1.00	10 to 70° (Light)	0.01 / 1°	165

6603DS-1

Liquid Petroleum Gas (LPG) Specific Gravity Hydrometer with Thermometer

LPG Hydrometers measure the specific gravity of LPG such as propane, butane, and other light hydrocarbons

Includes an internal thermometer for temperature measurement.

- Calibrated for use at 60°F

LIQUID PETROLEUM GAS (LPG) SPECIFIC GRAVITY HYDROMETER WITH THERMOMETER						
Cat. No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)	Thermometer Range	Thermometer Subdivision	Thermometer Liquid Fill
67101HTS	0.500 to 0.650	0.001	365	30 to 90°F	1°F	SafetyBLUE

67101HTS

Soil ASTM Specific Gravity Hydrometer

Measure the specific gravity of soil samples in suspension

Often used with a sedimentation cylinder for soil analysis.

- Calibrated for use at 68°F

SOIL ASTM SPECIFIC GRAVITY HYDROMETER				
Cat. No.	ASTM No.	Specific Gravity Range	Subdivisions	Approx. Length (mm)
67151H	151H	0.995 to 1.038	0.001	280

67151H

Soil ASTM Soil Colloids Hydrometer

Measure the amount of soil colloids in grams of soil samples in suspension

Often used with a sedimentation cylinder for soil analysis.

- Calibrated for use at 68°F

SOIL ASTM SOIL COLLOIDS HYDROMETER				
Cat. No.	ASTM No.	Soil Colloids Range	Subdivisions	Approx. Length (mm)
67152H	152H	-5 to 60g	1.0	280

67152H

Hydrometer Cases

PVC Hydrometer Cases help protect your hydrometer from damage

Ideal for storing your hydrometer when not in use, these cases feature a foam or felt padded insert and padded bottom and cap.

HYDROMETER CASES		
Cat. No.	Description	Approx. Length (mm)
66CS-8	PVC Case	216 / 8.5
66CS-8F	PVC Case, short	216 / 8.5
66CS-13	PVC Case	343 / 13.5
66CS-13J	PVC Case, wide-body	343 / 13.5
66CS-16	PVC Case	420 / 16.5

Hydrometer Jars

Made of borosilicate glass, these jars feature a beaded rim and a circular base

Sized properly to eliminate surface tension effects that lead to inaccurate readings.

- Model 21000-1000-L has a graduation line at 1000 mL for precise filling and is used as a sedimentation cylinder

HYDROMETER JARS		
Cat. No.	Description	Maximum Hydrometer Length (mm)
21000-250	250 mL Hydrometer Jar	215
21000-500	500 mL Hydrometer Jar	330
21000-1000	1000 mL Hydrometer Jar	385
21000-1000-L	1000 mL Hydrometer Jar with Graduation Line	385



Hydrometer Cases & Jars: Reference Guide

HYDROMETER CASES & JARS REFERENCE GUIDE				
Hydrometer Series	Description	Approx. Length (mm)	Uses Case	Uses Jar
6601-Series	Brix	330	66CS-13	21000-500
6601TS-Series	Brix w/Thermometer	370	66CS-16	21000-1000
6602, 6603-Series	Specific Gravity	305	66CS-13	21000-500
6603DS-Series	Specific Gravity & Baume	305	66CS-13	21000-500
6604-Series	Specific Gravity	165	66CS-8F	21000-250
6605-1	Specific Gravity & Baume: Universal	380	66CS-16	21000-1000
6609-Series	Baume: Heavy	305	66CS-13	21000-500
6611-Series	Salt	305	66CS-13	21000-500
6612-1	Alcohol: Tralle and Proof	305	66CS-13	21000-500
6612-2TS	Alcohol: Tralle and Proof w/Thermometer	355	66CS-16	21000-1000
6613-Series	Alcohol: Proof, IRS	230-305	66CS-13J	21000-500
6614TS-Series	Plato w/Thermometer	360-380	66CS-16	21000-1000
675xHTS-Series	API, ASTM w/Thermometer	380	66CS-16	21000-1000
67111H-67134H	Specific Gravity: ASTM	260-330	66CS-13	21000-500
67101HTS	LPG w/Thermometer	365	66CS-16	21000-500
6715xH	Specific Gravity or Soil Colloids: ASTM	280	66CS-13J	21000-500

We have a wide range of thermometers to measure and track temperatures for a wide range of applications. Our portfolio includes Dial (Bimetal), Digital and Glass Thermometers options to get the job done.

Dial Thermometers

Dial thermometers don't require batteries, are rugged, and readings can be adjusted with the calibration screw on the back

Indicates temperature through a metal stem with attached circular scale.

Application use varies with dial sizes, stem lengths and temperature ranges.

Dial Thermometers - 1" Diameter

Ideal for many applications including food and beverage quality control, general lab use, and asphalt/concrete testing

- The small stem and face fits nicely into a shirt pocket or holder
- Includes a plastic sheath with pocket clip for storage



DIAL THERMOMETERS - 1" DIAMETER						
Cat. No.	Temperature Range	Subdivisions	Accuracy	Face Diameter	Stem Length	Stem Diameter
81125	25 to 125°F	1°F	±1°F	1" / 25 mm	5" / 127 mm	0.138" / 3.5 mm
81070	-40 to 70°C	1°C	±1°C			
81110	-10 to 110°C	1°C	±1°C			
81550	50 to 550°F	5°F	±5°F			

Dial Thermometers - 1.75" / 2" Diameter

Ideal for many applications including food and beverage quality control, general lab use, and asphalt/concrete testing

- Larger dial size than common pocket thermometers for easier reading
- Features an adjustment screw for field calibration
- Includes a clip for container mounting



DIAL THERMOMETERS - 1.75" / 2" DIAMETER						
Cat. No.	Temperature Range	Subdivisions	Accuracy	Face Diameter	Stem Length	Stem Diameter
82125	25 to 125°F	1°F	±1°F	1.75" / 44.5 mm	8" / 203 mm	0.138" / 3.5 mm
82110	-10 to 110°C	1°C	±1°C	1.75" / 44.5 mm	8" / 203 mm	0.138" / 3.5 mm
82220	0 to 220°F	2°F	±2°F	1.75" / 44.5 mm	8" / 203 mm	0.138" / 3.5 mm
82550	50 to 550°F	5°F	±5°F	1.75" / 44.5 mm	8" / 203 mm	0.138" / 3.5 mm
82550DG	50 to 550°F / 10 to 290°C	5°F	±5°F	2" / 51 mm	8" / 203 mm	0.138" / 3.5 mm
		2.5°C	±5°C			

Dial Thermometers - 3" Dial

Ideal for many applications including soil testing, food and beverage quality control, and asphalt/concrete testing

- Constructed of stainless-steel case, bezel, and stem with a glass window
- Case is hermetically sealed to prevent lens fogging
- Includes a 1/2"NPT male thread on the back for threading into a pipeline
- Also features an adjustment screw for field calibration



DIAL THERMOMETERS - 3" DIAMETER

Cat. No.	Temperature Range	Subdivisions	Accuracy	Face Diameter	Stem Length	Stem Diameter
82160-6	-40 to 160°F	2°F	±2°F	3" / 76 mm	6" / 152 mm	0.25" / 6.4 mm
82160-12	-40 to 160°F	2°F	±2°F	3" / 76 mm	12" / 305 mm	0.25" / 6.4 mm

Long-Stem Dial Thermometers

Ideal for many applications including compost testing, food and beverage quality control, and asphalt/concrete testing

- Constructed of stainless-steel case, bezel, and stem with a glass window
- Case is hermetically sealed to prevent lens fogging
- Includes a 1/2"NPT male thread on the back for threading into a pipeline
- Also features an adjustment screw for field calibration



LONG-STEM DIAL THERMOMETERS

Cat. No.	Temperature Range	Subdivisions	Accuracy	Face Diameter	Stem Length	Stem Diameter
82200-36	0 to 200°F	2°F	±2°F	3" / 76 mm	36" / 914 mm	0.313" / 7.9 mm
82100-36	0 to 100°C	1°C	±1°C	3" / 76 mm	36" / 914 mm	0.313" / 7.9 mm
82200-48	0 to 200°F	2°F	±2°F	3" / 76 mm	48" / 1220 mm	0.313" / 7.9 mm

Swivel-Head Digital Thermometers

Digital stem thermometers are ideal for temperature monitoring in essentially any setting and application

- Laboratories - easily monitoring reagents and liquids in test tubes, beakers, and flasks
- Food Processing
- Refrigeration
- Horticulture

Both models feature a dual scale (°F / °C), fast 1-second update time, and a swivel head that can be moved a full 180° for easy reading in any position. Both the ON/OFF and scale selection buttons are located on the face for easy access.

The thermistor sensor stem is stainless steel, 0.138" (3.5 mm) diameter, and includes a protective case featuring a pocket clip. Includes a 1.5V alkaline battery (LR44) and features automatic power-off after 10 minutes of non-use.



SWIVEL-HEAD DIGITAL THERMOMETERS

Cat. No.	Temperature Range	Resolution	Accuracy	Stem Length	Stem Diameter
83210-12	-58 to 302°F / -50 to 150°C	0.1°	±2.0°F / 1.0°C	12" / 300 mm	0.138" / 3.5 mm
83110	-14 to 212°F / -10 to 100°C	0.1°	±1.0°F / 0.5°C	5" / 127 mm	0.138" / 3.5 mm

GLASS THERMOMETERS

VEE GEE thermometers feature a Safety Blue fill. This is an organic performance liquid that is bio-degradable and exhibits all the qualities of mercury without the risk of contamination and hazards associated with mercury.

Serialized Glass Thermometers

Precision, serialized thermometers are ideal for use in laboratories, universities, food/beverage, environmental, wastewater and many other general-purpose applications

- Feature Safety Blue fill against a white background for easy reading
- Accuracy is equal to one subdivision

SERIALIZED GLASS THERMOMETERS

Cat. No.	Temperature Range	Subdivisions	Length	Immersion
80701	-30 to 120°F	2°F	12"	Total
80702	-4 to 230°F	2°F	12"	Total
80703	0 to 300°F	2°F	12"	Total
80706	-35 to 50°C	1°C	12"	Total
80707	-20 to 110°C	1°C	12"	Total
80708	-20 to 150°C	1°C	12"	Total
80901	-30 to 120°F	2°F	12"	Partial
80902	-4 to 230°F	2°F	12"	Partial
80903	0 to 300°F	2°F	12"	Partial
80905	20 to 500°F	2°F	15.375"	Partial
80906	-35 to 50°C	1°C	12"	Partial
80907	-20 to 110°C	1°C	12"	Partial
80908	-20 to 150°C	1°C	12"	Partial
80910	-10 to 250°F	2°F	15.375"	Partial

80901

Serialized Encapsulated Glass Thermometers

Encapsulation protects you from broken glass and liquid

- Feature FEP encapsulation; in the event of breakage the FEP coating contains the broken glass and liquid, preventing injury or contamination
- Feature Safety Blue fill against a white background for easy reading
- Accuracy is equal to one subdivision

SERIALIZED ENCAPSULATED GLASS THERMOMETERS

Cat. No.	Temperature Range	Subdivisions	Length	Immersion
80701E	-30 to 120°F	2°F	12"	Total
80702E	-4 to 230°F	2°F	12"	Total
80703E	0 to 300°F	2°F	12"	Total
80704E	30 to 220°F	2°F	15.375"	Total
80706E	-35 to 50°C	1°C	12"	Total
80707E	-20 to 110°C	1°C	12"	Total
80708E	-20 to 150°C	1°C	12"	Total
80901E	-30 to 120°F	2°F	12"	Partial
80902E	-4 to 230°F	2°F	12"	Partial
80903E	0 to 300°F	2°F	12"	Partial
80904E	30 to 220°F	2°F	15.375"	Partial
80906E	-35 to 50°C	1°C	12"	Partial
80907E	-20 to 110°C	1°C	12"	Partial
80908E	-20 to 150°C	1°C	12"	Partial

80702E

Serialized Armored Glass Thermometers

Armor protects the thermometer from rough handling and shock during use

- Includes nickel-plated brass armor
- Feature Safety Blue fill against a white background for easy reading
- Accuracy is equal to one subdivision

SERIALIZED ARMORED GLASS THERMOMETERS

Cat. No.	Temperature Range	Subdivisions	Length	Immersion
80701-A	-30 to 120°F	2°F	12"	Total
80702-A	-4 to 230°F	2°F	12"	Total
80703-A	0 to 300°F	2°F	12"	Total
80706-A	-35 to 50°C	1°C	12"	Total
80707-A	-20 to 110°C	1°C	12"	Total
80708-A	-20 to 150°C	1°C	12"	Total
80901-A	-30 to 120°F	2°F	12"	Partial
80902-A	-4 to 230°F	2°F	12"	Partial
80903-A	0 to 300°F	2°F	12"	Partial
80905-A	20 to 500°F	2°F	15.375"	Partial
80906-A	-35 to 50°C	1°C	12"	Partial
80907-A	-20 to 110°C	1°C	12"	Partial
80908-A	-20 to 150°C	1°C	12"	Partial
80910-A	-10 to 250°F	2°F	15.375"	Partial

80701-A

Armored Encapsulated Glass Thermometers

Armor protects the thermometer and encapsulation protects you

- Includes FEP encapsulation and nickel-plated brass armor
- In the event of breakage, the FEP coating contains the broken glass and liquid fill, preventing injury or contamination. The armor protects the thermometer from rough handling and shock during use
- Feature Safety Blue fill against a white background for easy reading
- Accuracy is equal to one subdivision

ARMORED ENCAPSULATED GLASS THERMOMETERS

Cat. No.	Temperature Range	Subdivisions	Length	Immersion
80701E-A	-30 to 120°F	2°F	12"	Total
80702E-A	-4 to 230°F	2°F	12"	Total
80703E-A	0 to 300°F	2°F	12"	Total
80704E-A	30 to 220°F	2°F	15.375"	Total
80706E-A	-35 to 50°C	1°C	12"	Total
80707E-A	-20 to 110°C	1°C	12"	Total
80708E-A	-20 to 150°C	1°C	12"	Total
80901E-A	-30 to 120°F	2°F	12"	Partial
80902E-A	-4 to 230°F	2°F	12"	Partial
80903E-A	0 to 300°F	2°F	12"	Partial
80904E-A	30 to 220°F	2°F	15.375"	Partial
80906E-A	-35 to 50°C	1°C	12"	Partial
80907E-A	-20 to 110°C	1°C	12"	Partial
80908E-A	-20 to 150°C	1°C	12"	Partial

Armor Cases for Glass Thermometers

Nickel-plated brass armor cases protect liquid-in-glass thermometers from rough handling and shock during use

- Armors feature a threaded screw cap with ring top for suspension where necessary

ARMOR CASES FOR GLASS THERMOMETERS

Cat. No.	For Thermometer Length	Outside Diameter	Inside Diameter
83025A	12" / 305 mm	0.374" / 9.5 mm	0.295" / 7.5 mm
83025N	15.5" / 393 mm	0.374" / 9.5 mm	0.295" / 7.5 mm

83025A

Column Separation

The largest single cause for failure of liquid-in-glass thermometers in the lab is due to column separation. This can occur in transit or in the lab.

The simplest and safest method to reunite a separated column is to force the liquid down the capillary tube by using a centrifuge, if one is available with a cup deep enough to ensure that the centrifugal force is below the liquid column.

- Carefully insert the thermometer, bulb down, into the centrifuge. Place some cotton wadding at the bottom of the cup to prevent any damage to the bulb. Turn on the centrifuge - in just a few seconds all the liquid will be forced past the separation.
- If the cup is not deep enough and all the centrifugal force is not below the column, the column will split, forcing part of the liquid down. The remainder will be forced up, filling the expansion chamber.
- If a centrifuge is not available, the column can be reunited by holding the thermometer in an upright position and gingerly tapping the stem above the separation against the palm of your hand. As you gently tap the thermometer, observe the liquid above the separation until it breaks away from the wall of the capillary and runs down to join the main column.

Immersion Types

Thermometers are one of the most important instruments used in the laboratory and are a relatively inexpensive means of reliably measuring temperature, provided they are properly used and not abused.

It is essential that the instruments be used in the manner prescribed if true temperature are to be ascertained. The following are some terms that should be understood and adhered to when true temperatures are to be obtained:

Total immersion - such a thermometer is designed to indicate temperatures correctly when the bulb and the entire liquid column are exposed to the temperature being measured, except for a minimal length emergent to be visible. Therefore, the thermometer is immersed into the medium up to the point of reading.

Partial Immersion - such a thermometer has a line around it at the immersion distance from the bottom. The thermometer indicates correctly when the bulb and liquid column to that line are exposed to the temperature being measured and the emergent stem is at ambient temperature. Therefore, the thermometer is immersed only up to the immersion line.

Centrifuge/Stirrer

Multi-functional Lab Solution

Saves Valuable Benchtop Space

Perfect for Small Research & Education Labs



Holds
5mL
Tubes



High-Speed Mini Centrifuge



5
Year
Warranty

Two Units
in One!



EASY SWITCH OVER
NO
TOOLS REQUIRED

Magnetic Stirrer

High-speed Centrifuge is easy to use and designed to deliver maximum speed (12,500rpm/9,783x g) and flexibility with rapid acceleration and fast controlled breaking

Ideal for most protocols requiring fast spins including PCR, micro- filter cell separation and HPLC. Versatility to handle 0.2, 0.5, 1.5, 2.0 and 5.0mL tube sizes

Intuitive One-Dial Programming

Set speed and time with ease

- Adjustable speed from 500 to 12,500 rpm
- Speed setting for RPM or RCF
- Adjustable time from 30 seconds to 60 minutes

Safe to Use

Safety features help ensure it will not operate when the lid is open, a rotor is jammed, or the unit is out of balance

High-performance Magnetic Stirrer is designed using high quality rare earth magnets creating a robust magnetic coupling that significantly reduce the chance of spin-outs

Perfect for work with sensitive samples and protocols up to 3L requiring aggressive mixing for full dilution

Easy to Use

Set stir mode, speed and time with easy one-dial programming

- Select Mode: clockwise, c. clockwise and oscillate
- Adjustable speed from 50 to 2,500 rpm
- Continuous and adjustable time settings from 30 seconds to 60 minutes

Durable Accessories Included

- Re-usable, easy to clean silicone mats included to keep vessel stable and prevent spills and two rare-earth stir bars (40x12mm) with chemical resistant PTFE coating included

CENTRIFUGE/STIRRER

Cat. No.	Color	L x W x H in	L x W x H cm	UOM
35001	Grey	9.2 x 7.3 x 4.7	23.5 x 18.5 x 12	1 each

Package Includes

Centrifuge/Stirrer	Stirrer Rotor	12 Tube Adapters 0.2 mL
5 mL Tube Rotor	2 Stir Bars	12 Tube Adapters 0.5 mL
1.5 mL Tube Rotor	2 Silicone Mats for Stirrer Lid	
1 low voltage, double insulated power adapter with 4 interchangeable plugs		



Patent Information

Community Design No. 003515337-0001-0002

Euro. Pat. App. 3 246 088

US Design Patent No. D815,045

US Patent No. 10471439



Specifications: Centrifuge

Speed Range	500 – 999 rpm (increments of 1); 1,000 – 5,000 rpm (increments of 5); 5,000 – 12,500 rpm (increments of 25)
RCF	16 – 9,783 x g (max RCF calculated)
Run Time Ranges	30 seconds – 60 minutes (5 second increments)

Specifications: Magnetic Stirrer

Speed Range	50 – 999 rpm (increments of 1); 1,000 – 2,500 rpm (increments of 5)
Run Time Ranges	Stirrer Mode 30 seconds to 60 minutes or continuous (5 second increments)
	Oscillating Stirrer Mode 1 second – 60 minutes or continuous
	Oscillating Period 30 seconds – 15minutes
Capacity	3 liters plus. Diameter of vessel not to exceed 130 mm

Centrifuge/Stirrer

Multi-functional Lab Solution



Specially Designed Inserts

seat the centrifuge, all its accessories, and includes a tube rack



12 Volt Car Adapter
for on-the-go testing

The Portable Centrifuge Kit offers a convenient way to spin down and prepare samples outside of a conventional laboratory environment

Immediate Field Processing

Process samples in un-powered remote areas before deterioration can take place

Allows for immediate on-site testing for faster results

Made of durable ABS plastic for easy clean in field environments

Easy to Use

Centrifuge is equipped with tool-less SnapSpin rotors for easy change out

Simple operation with lock/unlock activation

Portable Convenience

All items in kit are housed in a handled Transport Box for portability

The handled box has an air-tight seal for optimal sample protection



CENTRIFUGE/STIRRER

Cat. No.	Description	UOM
35005	Portable Centrifugation Kit, 100-240VAC, 50/60Hz Universal Plug + 12V Power Adapter	1 each

**Adapter can be used with Mini Centrifuge units manufactured Jan 1, 2016 - present*



Package includes:

- Mini Centrifuge
 - 6 Place 1.5/2.0 mL SnapSpin tube rotor
 - 16 Place 0.2 mL SnapSpin tube rotor (singles or 2x8 strip)
 - 6 Tube adapters (0.2 mL)
 - 6 Tube adapters (0.5 mL)
 - 4 O-rings
 - Storage case for rotors and adapters
 - 16 Place tube rack
 - Low voltage, double insulated power adapter with 4 interchangeable plugs
- Transport Box
 - 16 Place tube rack insert
 - Transport box dividers
 - Mini Centrifuge cradle
- Portable 12-volt Centrifuge adapter
- Five-year warranty



DuraPorter®

Portable Transport Box

Carry handle folds

neatly into body space allowing the units to be stacked

Silicone Water-tight Seal

and three lid clasps provide secure closure



DuraPorter®

Portable Transport Box

Ideal for transporting instruments and products that you want to keep clean and dry under testing environmental conditions

- The DuraPorter® transparent design helps comply with OSHA 29 CFR 1910.1030 standards without having to re-label containers and enabling the user to visibly check sample integrity
- Polycarbonate construction and available in three colors for user/owner identification
- Accommodates 13 mm, 16 mm and 20 mm tubes with our Half and Full Size OneRack®
- Use the separators provided to create your own compartment sizes



Lid Opens a Full 180°

to expedite loading and emptying



DURAPORTER®			
Cat. No.	Color	L x W x H (in)	L x W x H (cm)
31220-1	Clear with Blue Handle	15 x 7.7 x 6.3	38 x 19.6 x 16
31220-2	Red with Red Handle		
31220-3	Yellow with Yellow Handle		

VEE GEE



sales@novatech-usa.com

www.novatech-usa.com

Tel: (866) 433-6682

Fax: (866) 433-6684

Tel: (281) 359-8538

Fax: (281) 359-0084

VEE GEE Scientific LLC

620 Lakeview Parkway
Vernon Hills, IL 60061

800.423.8842
www.veegee.com

Customer Service: sales@veegee.com
Tech Support: techsupport@veegee.com