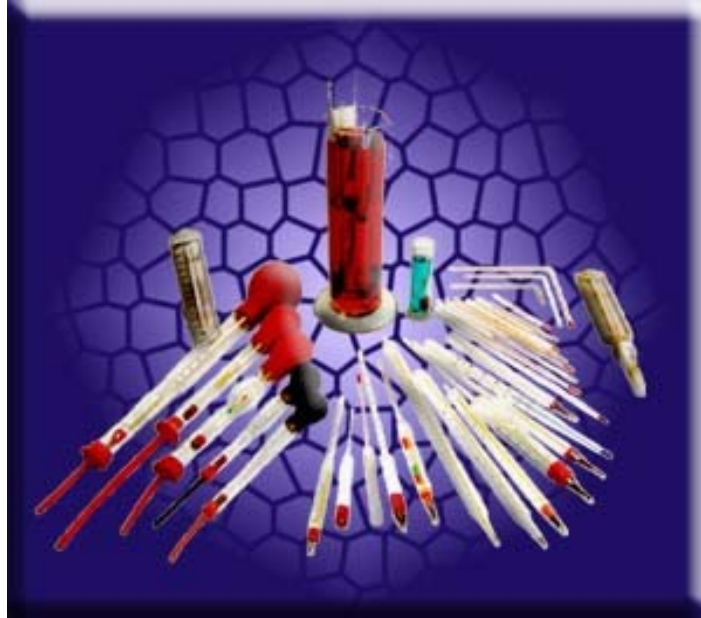


# Freas Glass Works, Inc.

## *Product Catalog*



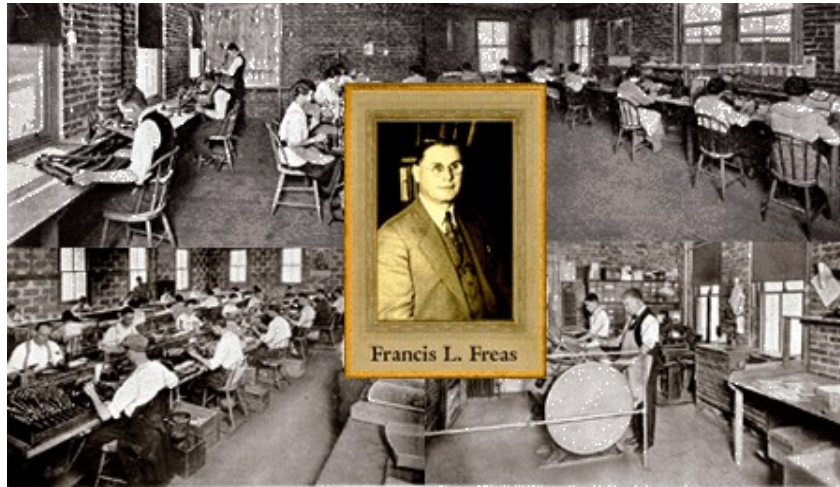
*Manufacturing the World's Finest Quality Instruments*

*Since 1905*

**Proudly Made in the**  
**USA**

144 East Ninth Ave.  
Conshohocken, Pa 19428  
Phone: 610-828-0430  
Fax: 610-834-0430  
[sales.fgw@comcast.net](mailto:sales.fgw@comcast.net)  
[www.freassglass.com](http://www.freassglass.com)





## A Proud and Distinguished History

In 1905, Francis L. Freas founded FRANCIS L. FREAS GLASS WORKS. He began manufacturing different types of hydrometers, thermometers, and other scientific instrumental glassware.

Our hydrometers and correction thermometers were essential to the then fledgling automotive industry for the testing of storage batteries. Their use is still a vital part of that business today. Years of intense experimental design and development have given our company a top line of syringe type battery testing hydrometers which are being used worldwide and are of the finest quality to be found.

During World Wars I and II, our products figured prominently in the war effort. They were used extensively for the testing of automotive and marine storage batteries. We have been awarded the “E” for excellence in manufacturing for the production of dependable instruments during World War II. Today our products are being used in the rapidly growing solar energy and bio-diesel industries.

Our diversified products include a complete line of thermometers and hydrometers for the vehicular and industrial trade as well as for the wine, beer, and dairy industries. We also offer aquarium salinometers and some medical instruments such as urinometers and incubator thermometers. Our products are of the finest quality and are unsurpassed in precision, dependability, and durability. If a customer requires a specialized product, we are capable of designing whatever type of instrument may be needed for his individual use.

Truly, the quality, workmanship, and accuracy of each of our handmade products give a lasting testimonial to this long established and well respected leader in this unique business.

# Freas Glass Works, Inc.

144 East Ninth Avenue  
Conshohocken, PA 19428

Terms: Net 30 Days

Minimum Order: \$40.00

Call For Pricing

F.O.B.: Conshohocken, PA U.S.A 19428

All Hydrometers And Thermometers  
Can Be Certified to N.I.S.T.



# Hydrometers – Battery

## No. 1 Hydrometer Set



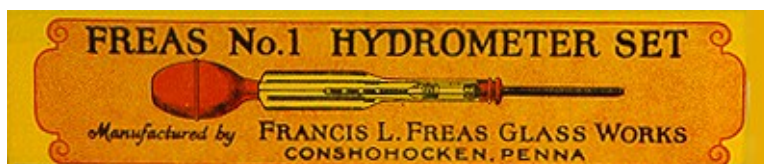
**"Made in the USA"**

This set requires a very small quantity of electrolyte to secure a reading because it is scientifically designed.

Float is 4 inches long and has a specific gravity scale range of 1.100 to 1.300.  
Precisely calibrated; All hydrometers are Traceable to NIST.

This scientifically shaped barrel is proportioned to give free and accurate readings continually. This finely produced piece has a one ounce rubber bulb capacity. We use only the very highest grade acid-resistant rubber with a durable rubber ended tip. Overall length of set is 12 inches.

Customer's name printed in float on orders of 250 or more.  
Set includes glass barrel, hydrometer and rubber parts.



# No. 10 Hydrometer Set



For long, dependable, and accurate service.

Float has three-color scale showing condition of battery: empty, half, and full charge.  
Scale also shows specific gravity from 1.100 to 1.300.

Floats have nubs to provide free working of the instrument.

Set has 2-ounce rubber bulb. Bulb and one-piece 3 inch tip are made from acid-resisting rubber stock.

# No. 11 Clearview Hydrometer Set



Easy to read – Clear vision of the float.

Set has cone-shaped glass barrel, well annealed.

Float has 3-color scale showing charge condition of battery as well as specific gravity reading from 1.100 to 1.300.

Float is provided with nubs to prevent any adherence to barrel.

The 2-ounce rubber bulb and end piece are made of high grade acid-resisting rubber for long life.

End piece has non-roll feature.

Overall length of assembled set – approx. 13 inches.

# No. 98 Hydrometer Set



To secure an absolutely correct specific gravity reading of the electrolyte in a battery, the temperature of the electrolyte must be taken into consideration since the reading changes with temperature.

This instrument is designed to give you the temperature and also a gravity correction for the temperature indicated along with the hydrometer reading of the battery tested.

Thermometer has a scale range of 30-130 degrees Fahrenheit, graduated in degree divisions, numbered every 10 degrees. It also has a specific gravity correction scale in red giving the corrections for the temperature of the electrolytes. Thermometer is accurate within one degree high or low.

Scale is calibrated for 77 degree Fahrenheit correction. A chart in the thermometer section of the instrument indicates the specific gravity correction opposite the temperature of the solution being tested.

Set is provided with a step down barrel, well annealed to strengthen glass.

Specific gravity range from 1.140 to 1.300. Approx length of assembled set – 20 inches.

The rubber bulb capacity is 4 ounces and the end piece is 6 inches long with the non-roll feature.

Careful re-checking before packing guarantees accuracy. This set is another of our highest grade products.

# No. 99 Hydrometer Set



This is a big rugged instrument with a clear easy reading scale frequently used for service stations.

Float has a specific gravity scale range of 1.150 to 1.300, graduated in 5 degree divisions and guaranteed accurate.

Barrel is step down type, well annealed and free from strains. Correctly proportioned.

The 2-ounce rubber bulb and end piece are made from the highest grade acid-resisting rubber. End piece has a square flange to prevent rolling and a tube 3 inches long.

Overall length of assembled set – approx. 18 inches.

**#99 Modified Hydrometer Sets & Floats, 0.005 degree divisions,  
(60/60 Degrees F standard) in the Following Ranges:**

0.700 to 1.000 Sp. Gr.	1.100 to 1.320 Sp. Gr.	1.200 to 1.400 Sp. Gr.
1.000 to 1.200 Sp. Gr.	1.100 to 1.400 Sp. Gr.	1.260 to 1.400 Sp. Gr.
1.000 to 1.250 Sp. Gr.	1.150 to 1.300 Sp. Gr.	1.300 to 1.500 Sp. Gr.
1.000 to 1.400 Sp. Gr.	1.150 to 1.350 Sp. Gr.	1.400 to 1.600 Sp. Gr.
1.050 to 1.250 Sp. Gr.	1.150 to 1.400 Sp. Gr.	1.600 to 1.820 Sp. Gr.
1.060 to 1.240 Sp. Gr.	1.160 to 1.300 Sp. Gr.	1.800 to 2.000 Sp. Gr.
1.100 to 1.300 Sp. Gr.	1.160 to 1.320 Sp. Gr.	

Also Available in 80/80 Degrees F or 77/77 Degrees F.

**Hydrometer Floats in 0.002 Divisions in the Following Ranges:**

0.680 to 0.800 Sp. Gr.	1.070 to 1.170 Sp. Gr.	1.200 to 1.300 Sp. Gr.
0.700 to 0.800 Sp. Gr.	1.100 to 1.200 Sp. Gr.	1.230 to 1.330 Sp. Gr.
0.750 to 0.850 Sp. Gr.	1.100 to 1.300 Sp. Gr.	1.250 to 1.350 Sp. Gr.
1.000 to 1.100 Sp. Gr.	1.150 to 1.310 Sp. Gr.	1.300 to 1.400 Sp. Gr.
1.040 to 1.120 Sp. Gr.	1.170 to 1.280 Sp. Gr.	1.400 to 1.500 Sp. Gr.
1.050 to 1.150 Sp. Gr.	1.180 to 1.280 Sp. Gr.	

**Hydrometer Floats in 0.001 Divisions:**

0.800 to 0.850 Sp. Gr.	1.170 to 1.240 Sp. Gr.
0.900 to 0.950 Sp. Gr.	1.200 to 1.300 Sp. Gr.
0.940 to 1.000 Sp. Gr.	1.240 to 1.300 Sp. Gr.



*Individual Floats Available*



*6 oz. Battery Filler*

## **No. 706 Freezometer Set**

Float has 4-way scale for testing alcohol, Prestone, Zerone, and glycerin.

Floats have nubs to insure free operation of the instrument.

Set has a 2-ounce red rubber bulb. Bulb and one-piece 6 inch tip are made from acid-resisting rubber stock. Tip has the non-roll feature.

Overall length of assembled set – 15 inches.

## **No. 707 Freezometer Set**

Set has tapered glass barrel, well annealed.

Float has 4-way scale for testing alcohol, Prestone, Zerone, and glycerin.

Float is provided with nubs to prevent any adherence to barrel.

The 2-ounce red rubber bulb and end piece are made of a high grade acid-resisting rubber for long life. End piece has non-roll feature as shown in illustration.

Overall length of assembled set – 15 inches.

## **No. 711 Freezometer Set**

**“The Best Freezometer Ever Designed!!”**

Here is a Freezometer set that will ring up some real profit for you. This instrument gives a quick, easy reading based on the temperature of the solution being tested.

A big, rugged instrument having rubber parts of the highest grade obtainable to insure long, dependable service.

The scale is calibrated for freezing points of the three popular solutions: Alcohol, Zerone, and Prestone.

The set is provided with a shaped barrel, well annealed to strengthen the glass. The rubber bulb has a capacity of four ounces and the end piece is seven inches long with the non-roll feature.

This instrument is accurate, being carefully rechecked before packing. It is a set of the highest grade possible to produce. Overall length assembled – 22 inches.

# No. 280, 330, 310, 170, 250 Hydrometer Set

Comes with safety equipped, non-drip plug.

Multi-use attachments include straight, flexible, and z-shaped tips for various applications



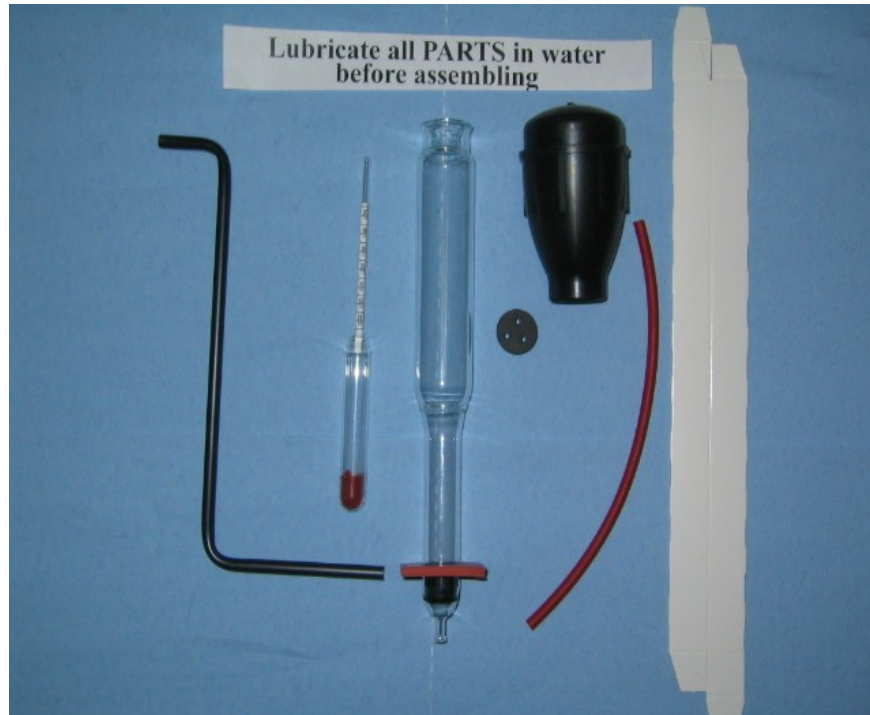
# No. 10 1/2" Cone Barrel Hydrometer Set

Designed with easy read viewing bubble.



## **No. 634, 635, 636 Hydrometer Set**

**Comes with safety equipped, non-drip plug.  
Attachments include straight, flexible, and z-shaped tips  
for various applications.**



## **No. 1306 Hydrometer Set**

**Comes with safety equipped, non-drip plug.  
Attachments include straight, flexible, and z-shaped tips  
for various applications.**



## No. 1308 Hydrometer Set

Comes with safety equipped, non-drip plug.  
Attachments include straight, flexible, and z-shaped tips  
for various applications.



## No. 8745 Hydrometer Set

Range 0.750-1.200



## No. 13142 (V2B) Set



## No. 81332 (V2B) Set



**12" Master Mixing Hydrometer Floats or #1040 Lab Floats,  
Used in a Beaker**

**0.005 Degree Divisions:**

1.000 to 1.400 Sp. Gr.
1.000 to 1.500 Sp. Gr.
1.100 to 1.300 Sp. Gr.
1.300 to 1.500 Sp. Gr.

**60/60 Degrees F standard. Anything other than 60/60 F must be specified.**

**0.002 Degree Divisions:**

1.000 to 1.220 Sp. Gr.	1.300 to 1.500 Sp. Gr.	1.800 to 1.860 Sp. Gr.
1.050 to 1.150 Sp. Gr.	1.400 to 1.620 Sp. Gr.	1.800 to 2.000 Sp. Gr.
1.100 to 1.300 Sp. Gr.	1.600 to 1.820 Sp. Gr.	
1.200 to 1.420 Sp. Gr.	1.700 to 1.900 Sp. Gr.	

**60/60 Degrees F standard. Can be made 80/80 or 77/77 Degrees F. Must Specify.**

**0.001 Degree Divisions:**

0.600 to 0.700 Sp. Gr.	0.900 to 1.000 Sp. Gr.	1.200 to 1.300 Sp. Gr.
0.700 to 0.800 Sp. Gr.	1.000 to 1.100 Sp. Gr.	1.300 to 1.400 Sp. Gr.
0.800 to 0.900 Sp. Gr.	1.100 to 1.200 Sp. Gr.	1.350 to 1.450 Sp. Gr.

## Flux Hydrometers:

Modified #10	0.800 to 1.000 Sp. Gr.
Modified #99	0.800 to 1.000 Sp. Gr.

# Measurement of Heavy Liquid

## 12" Hydrometer, 60/60 Degrees F

<u>Ranges</u>	<u>Divisions</u>
1.000 to 2.000 Sp. Gr.	.01
1.800 to 2.000 Sp. Gr.	.002
2.200 to 2.400 Sp. Gr.	.005
2.500 to 2.700 Sp. Gr.	.002
2.600 to 2.850 Sp. Gr.	.002
2.700 to 3.500 Sp. Gr.	.010
2.800 to 3.050 Sp. Gr.	.005
2.950 to 3.250 Sp. Gr.	.005

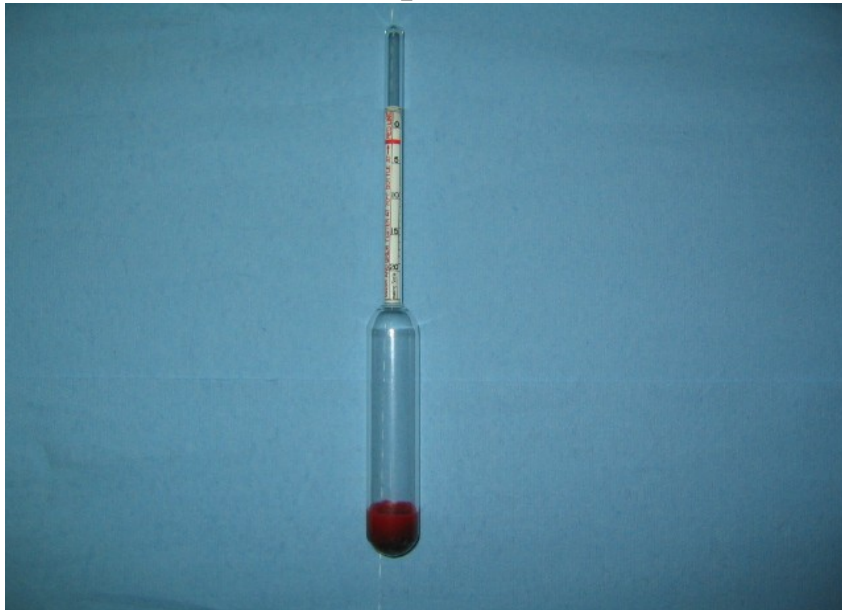
## 6-11/16" Hydrometer, 60/60 Degrees F .005 Degree Divisions:

2.200 to 2.400 Sp. Gr.	2.600 to 2.850 Sp. Gr.
2.400 to 2.600 Sp. Gr.	2.800 to 3.050 Sp. Gr.
2.500 to 2.700 Sp. Gr.	2.900 to 3.250 Sp. Gr.

# Hydrometers – Beer

## Brew Tester

8-inch, shows balling scale 0 to 20,  
percent scale 1/2% to 10% and red "bottle" line.  
Packed in plastic cases.



## Proof & Tralle

7½-inch & 11-inch long, shows proof in 0 to 200  
and shows tralle in 0 to 100



# Brew Master Combo

**11½-inch, shows balling scale 0 to 28, percent scale ½% to 13%  
and red "bottle" line.**

**Temperature 24 degrees F to 100 degrees F.**

**Packed in plastic cases.**



# Hydrometers - Wine

## 5-inch Miniature

Double scale shows:

Specific Gravity: 1.000 to 1.160

Potential Alcohol by Volume: 0% to 20%



## 9-inch Triple Scale

Balling: 0 to 35

Specific Gravity: .990 to 1.170

Potential Alcohol by Volume: 0% to 22%



# 13-inch Triple Scale Combination

**Balling: 0 to 35**

**Specific Gravity: .990 to 1.170, +20 to 120F**

**Potential Alcohol by Volume: 0 to 20%**



# Hydrometers – Brix

Brix Hydrometers in plain form or with built-in thermometers with correction tables.

0 to 40 degrees C in the following ranges:

-5 to +5, 0 to 10, 10 to 20, 15 to 25, 20 to 30,  
30 to 40, 40 to 50, 50 to 60, 60 to 70 & 70 to 80



*Brix Regular*



*Brix Combo with Thermometer*

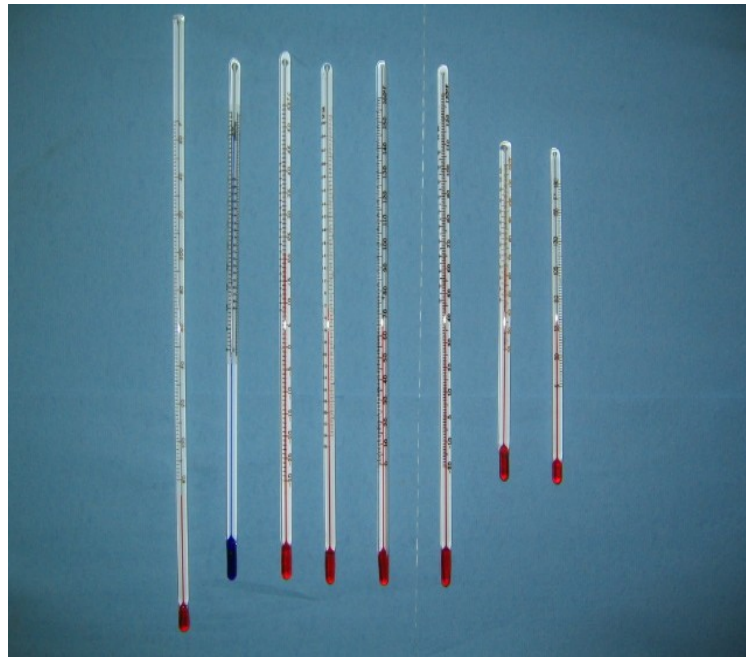
# Thermometers – Battery

To secure an absolutely correct specific gravity reading of the electrolyte in a battery, the temperature of the electrolyte must be taken into consideration since the reading changes with the temperature.

## Chemical

**Red spirit** filled, also available with **enviro-friendly biodegradable** liquid  
6-7mm diameter with permanently fused scale

No. 1352	<b>0 @ 77F, Correction +20 to 120 Deg. F 6½" Long. 1 degree divisions.</b>
No. 102	<b>0 @ 80F, Correction 5 to 180 Deg. F Ring Top 6¾" Long. 2.5 degree divisions.</b>
No. 1353	<b>0 @ 77F, Correction -20 to 130 Deg. F 10" Long. 1 degree divisions.</b>
No. 644	<b>0 @ 77F, Correction 0 to 160 Deg. F 10" Long. 1 degree divisions.</b>
No. 648	<b>0 @ 25C, Correction -15 to 70 Deg. C 10" Long. 1 degree divisions.</b>
No. 168	<b>0 @ 25C, Correction -30 to +55 Deg. C 10" Long. 1 degree divisions.</b>
No. 88330	<b>Dual Scale Correction Thermometer (blue spirit). 0 to 55 degrees Celsius. 30 to 130 degrees Fahrenheit. 1 degree divisions. 0 @ 77F.</b>



# Insulated

Thermometers have a scale range of 0-130 degrees Fahrenheit graduated in single degree division, numbered every ten degrees. It also has a specific gravity correction scale in red giving the corrections for the temperature of the electrolyte

**Red spirit** filled, also available with **enviro-friendly biodegradable** liquid  
**6-7mm diameter with permanently fused scale**

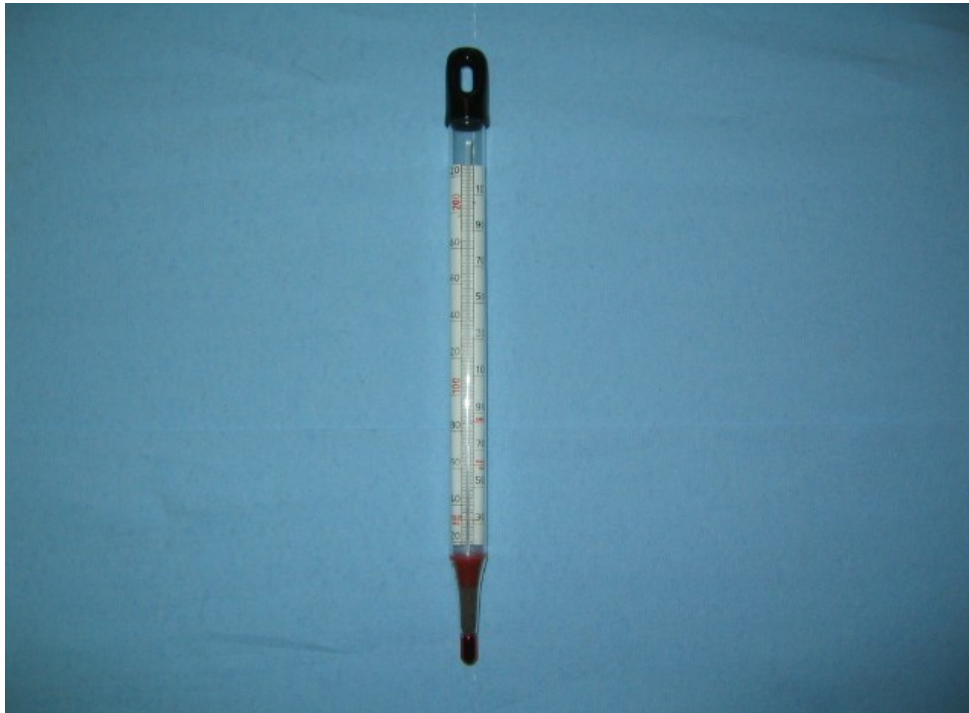
No. 113	Correction Thermometer, 0–130 Deg. F, 0 @ 80, 0 @ 70F, 0 @ 60 F, 0 @ 77F. 1 degree divisions
No. 3200	Correction Thermometer, 10–160 Deg. F, 0 @ 80 F. 1 degree divisions
No. 5-3200	Correction Thermometer, 10–220 Deg. F, 0 @ 80 F, 0 @ 70F, 0 @ 77F, 0 @ 60F 2 degree divisions
No. 001	Approx length 6½" Pilot Cell Thermometer 30–120 Deg. F, 0 @ 77F 2 degree divisions
No. 002	Approx length 8½" Pilot Cell Thermometer 30–120 Deg. F, 0 @ 77F 2 degree divisions
No. 003	Approx length 9½" Pilot Cell Thermometer 30–120 Deg. F, 0 @ 77F 2 degree divisions



# Thermometers – Pasteurizing

Red spirit filled, also available with enviro-friendly biodegradable liquid.  
Available with hanger top.

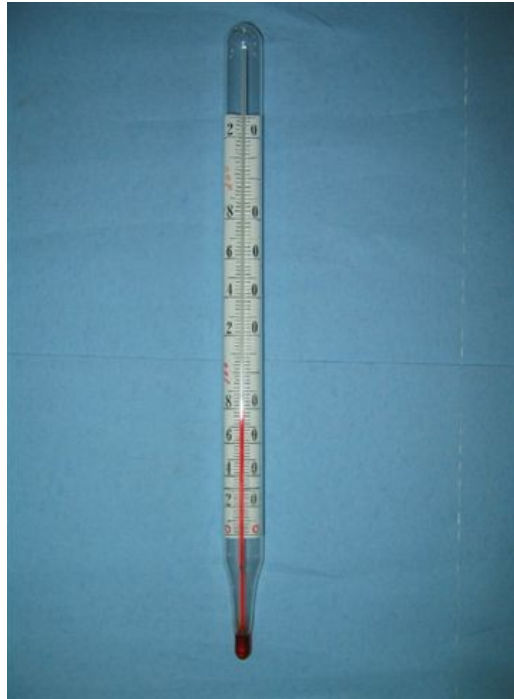
No. 102:	16.5 – 17mm diameter. Approx. 10” long. Range: 20-220 F. 2 degree divisions Markings at “freezing”, “churning”, and “cheese”.
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# Thermometers – Beer

## Giant 12" Floating Paper Scale Thermometers

Giant 12-inch	+20 to 230 degrees F in Red Spirit -10 to 110 degrees C in Red Spirit 0–100 degrees C in Red Spirit
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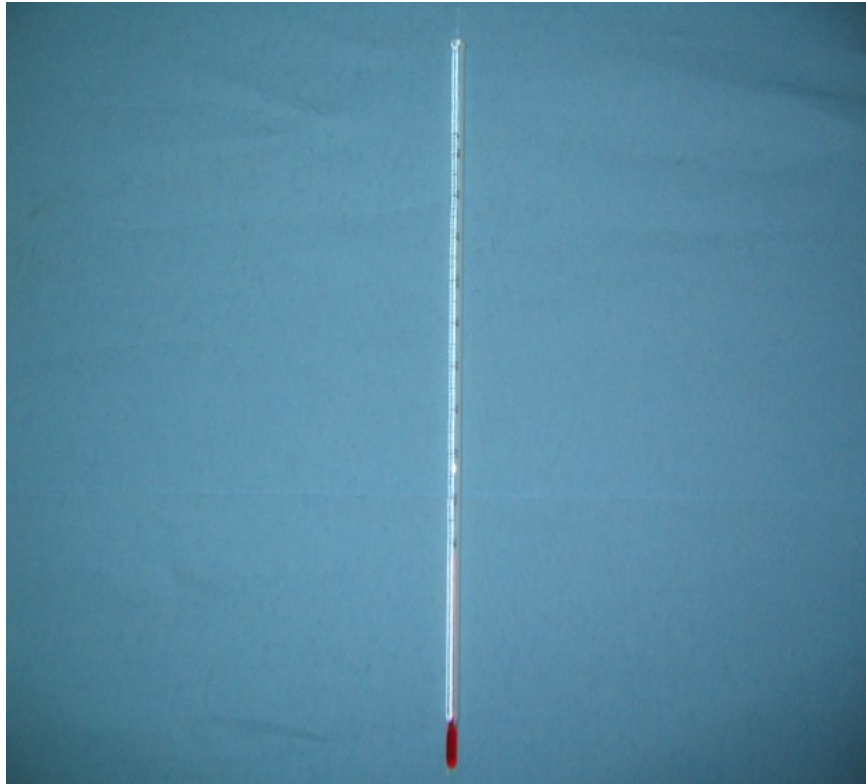


# Thermometers – Radiator

Used primarily in the auto industry to test temperature of antifreeze.  
Red spirit filled, also available with enviro-friendly biodegradable liquid.

No. 550

6.5 - 7.0 mm diameter. Approx. 12" long.  
Range: 80 – 270 F. Available with armored case



# Specialty –

## Glass Wine Thief

19 mm O.D. x 10½" long with Finger Hold and Taper Tip  
25 mm O.D. x 15" long with Finger Hold and Taper Tip



# Motor Home Hydrometer/Thermo kit

An absolute must have kit for the motor home enthusiast. Eliminate travel problems with this motor home battery testing kit. Perfect for testing and maintaining all motor home battery systems.



## Kit contains:

1- Our Best Selling No. 1 Hydrometer Set

1 - Paper Scale Thermometer:

Range 0-130F, approx. 10.5 inches long with extended 1/4" lower portion for easy use

# “Made to Order”

We have a line of specialty instruments for a variety of important uses. Our ability to handcraft the world's finest and most accurate scientific instruments, means we can custom manufacture an instrument that best fits your needs.

We are able to offer you alcohol, syrup, sugar, hydrogen peroxide, barkometer, incubator, soil, urinometer, salinometer, and other “made to order” products for your use.

In addition to standard type products, we will do our best to supply you with any custom product you may require. The challenge is exciting and we are here to give you the best.

Just give us a call, fax, or [email](#) concerning your specific desires and we will be pleased to respond.



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