

Vendors and Prices for Non-Mercury Equipment

<u>Product and Vendor</u>	<u>Cost</u>	<u>Comments</u>
Science Equipment		
Lab Thermometers		
Enviro-Safe Thermometers	\$7.50-\$12.60 ea. depending on temperature range. Can get reduced price as low as \$5.00 when purchased in bulk.	Enviro-Safe thermometers feature biodegradable non-toxic fluid (green), certified calibration, white background and are guaranteed to be as accurate as mercury thermometers. Ranges are -20 to +110°C, -10 to +260°C 1°C , and -20 to +150°C.
Alcohol Thermometers	\$4.00-\$5.00 ea.	Methyl alcohol thermometers (red fluid) are less accurate than the Enviro-Safe thermometers.
Digital Thermometers	\$25.00-\$122.00 ea.	Digital thermometers are required for higher temperatures. Ranges are -58 to 1999 °F, and -50 to 1200 °C for the higher cost thermometer. Less expensive thermometers have similar ranges as the Enviro-Safe thermometers.
Sargent-Welch 800-727-4368 www.sargentwelch.com		

Flinn Scientific, Inc.
800-452-1261
www.flinnsci.com/index.asp

Barometers

Eco-Celli Liquid Silicon Gas Barometers

The **Eco-celli barometer** uses a red, non-toxic silicon fluid and gas, and contains a methyl-alcohol thermometer. A sliding scale between two tubes compensates for thermal expansion of the silicone fluid due to changes in room temperature and allows for accurate measurement of air pressure. The barometer has good teaching properties because it enables students to visualize concepts.

Allivan Marketing, LLC
978-649-8547

\$249.00 ea. (\$50.00 rebate with certificate of recycling)

www.allivanmktg.com/E038501.htm

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Electronic Barometers

\$153.00 ea.

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800-727-4368

www.sargentwelch.com

Aneroid Barometers

\$39.95 - \$85.00 ea.

Aneroid barometers provide dual-scale measurement – millibars and millimeters or centimeters, millibars and inches.

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Spectrum Tubes

\$33.25-\$52.95 ea.

Alternative gases include air, argon, bromine vapor, carbon dioxide, chlorine, deuterium, helium, hydrogen, iodine vapor, krypton, neon, nitrogen, oxygen, water vapor, and xenon.

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Psychrometers

Sling Psychrometers

\$81.00-\$99.00 ea.

Sling psychrometers are designed with a built-in slide rule to convert wet and dry bulb readings to relative humidity, eliminating the need for calculating tables. They operate in the 20° to 120°F range with 1° divisions. Sling psychrometers include 9" inch tubes recessed in gray metal backing and have a folding swivel handle. They are boxed with spare wicks and instructions. When ordering, you **must specify Permacolor™ (non-mercury) model.**

Analytical Scientific, Ltd.
800-364-4848
www.analyticalsci.com

Sling Psychrometer Kits

\$79.95 ea.

Must specify non-mercury model.

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800-452-1261
www.flinnsci.com/index.asp

Charles' Law Apparatus

Elasticity of Gases Apparatus

\$11.50 ea.

The **Elasticity of Gases Apparatus** comes in two versions. Both include an airtight plastic syringe supported between two wood blocks. With the first version, placing various weights (not included) on the upper block compresses the gas, allowing pressure and volume measurements to be made to verify Boyle's law. The second version also includes a wood support with holes for the syringe and also a thermometer (not included) to allow suspension in a beaker of heated water for verifying Charles' Law.

Set of Weights

\$21.00-\$46.00

Charles' Law Apparatus

\$365.00 ea.

The high-quality **Charles' Law Apparatus** enables students to precisely determine the volume coefficient of the expansion of air in a temperature range of almost 100 °C. A specially configured glass U tube features one arm with a funnel top and the second arm closed at the end and surrounded by a glass water jacket. The apparatus is sold with a stirrer, beaker, level indicator, support stand, and instructions. Not included are a standard lab thermometer and sulfuric acid.

Sargent-Welch
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www.sargentwelch.com

Molecular Motion Demonstrators

\$369.00 ea.

Designed for use on an overhead projector, the **molecular motion demonstrator** illustrates the random motion of molecules, diffusion of gases, Brownian motion, Boyle's and Charles' laws, states of matter, and change of state. The base of the demonstrator is 26.5cm square, and the active chamber is 11.5cm square. It includes five different types of balls to represent different molecules, a disk to represent a smoke particle, barriers for demonstrations of diffusion and confinement, a glass dish for showing molecular motion in solids and liquids, and a complete study guide with background and instructions for 11 experiments.

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Hygrometers

\$42.30 ea.

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www.sargentwelch.com

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800-452-1261
www.flinnsci.com/index.asp

Manometers

\$79.50 ea.

The **Demonstration Manometer** not only measures the pressure of liquids and gases with a large, glass U-tube but can also show how columns of liquid can be made to oscillate. The open-ended tube is fastened to a durable hardwood backboard held upright on a heavy metal support. A convenient metric scale is mounted between the arms of the tube for easy-to-read measurements. Any colored liquid will work well in this demonstration unit – mercury is not required. Complete instructions are included.

Sargent-Welch
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www.sargentwelch.com

Sphygmomanometers for Biology Class

Aneroid Sphygmomanometers \$30.00 ea.

Economical, easy to use **aneroid sphygmomanometers** feature Velcro® cuffs, chrome air valves, and latex inflation systems. They include zippered vinyl pouches and instructions. Just add a stethoscope to measure blood pressure.

Digital Blood Pressure/ Pulse Monitors \$152.50 ea.

The **digital blood pressure/pulse monitor** quickly and easily measures blood pressure and pulse rate automatically from the wrist. The units eliminate placement errors with their specially designed cuff that fits around the wrist. Easy to read, oversized LCD indicates blood pressure, pulse rate, time and date. The unit also features two-person memory recall system.

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Medical Equipment

Medical Sphygmomanometers

Aneroid Sphygmomanometers \$125.00-\$225.00 ea.

The Welch Allyn and WA Baum **Aneroid Sphygmomanometers** are top quality non-mercury sphygmomanometers. It is important to replace the mercury units with high quality instruments. The Welch Allyn is latex-free, has a laser-engraved dial for accuracy, and has a large easy-to read-face.

*Welch Allyn offers a Mercury Replacement Program for take-back of replaced mercury sphygmomanometers.

Caligor/BMB
Bronx
914-738-8400
www.caligor.com

Cornell University Medical
Bookstore
Cornell
212-988-0400
cornell-med.bkstore.com

Mckesson Medical-Surgical Inc.
Rochester
800-234-2684
www.mckesson.com

New York Chiropractic College
NYCC Bookstore
Seneca Falls
315-568-3133
www.nycc.bkstr.com

PSS Physician SVCS
Rochester
585-427-8240
www.mypss.com

A J Medical
East Syracuse
315-701-2822
www.ajmedical.net

Fever Thermometers

Geratherm Liquid-in-Glass Oral Thermometers

\$2.99-\$3.52 ea. depending on quantity purchased

Geratherm liquid-in-gas thermometers are very accurate and safe, and are a cost-effective alternative to mercury thermometers. The mercury-free, liquid-in-glass thermometer contains non-toxic silver colored Galinstan fluid (gallium, indium, tin). Dual scale reads in both Fahrenheit and Celsius, no batteries required, and custom probe covers are available.

RG Medical Diagnostics
888-596-9498
www.rgmd.com

Buffalo Hospital Supply Co.
716-626-9400
www.buffalohospital.com

Geratherm Digital Oral Thermometers

\$2.92 ea. for 100 or more with button cell batteries

Geratherm digital thermometers are high quality and reliable. BD Becton Dickinson also makes high quality digital thermometers available in pharmacies.

\$6.47 ea. for 100 or more solar-powered

RG Medical Diagnostics
888-596-9498
www.rgmd.com

Sure Temp Thermometers

\$195.00-\$238.00 ea. (negotiable if bought in bulk)

The Welch Allyn **SureTemp** is the fastest oral/axillary thermometer on the market and provides:

- 4-second oral temperatures
- 10-second axillary temperatures (for children under four years)
- 15-second rectal temperatures
- continuous temperature monitoring
- probe covers that may be ejected automatically
- large LCD temperature display in Fahrenheit or Celsius
- last temperature recall capability
- stainless steel probe shaft

Caligor/BMB
Bronx
914-738-8400
www.caligor.com

Mckesson Medical-Surgical Inc.
Rochester
800-234-2684
www.mckesson.com

Mohawk Hospital Equipment Inc.
Utica
315-797-0570
www.mohawkhospital.com

PSS Physician SVCS
Rochester
585-427-8240
www.mypss.com

A J Medical
East Syracuse
315-701-2822
www.ajmedical.net

LJ Jones Surgical Company
Forest Hills
718-261-9500

N.S. Low & Co., Inc.
Glendale
718-386-7911
www.nslow.com

Benson's Surgical Supply Co.
Buffalo
716-875-1113
www.bensonsurgical.com

Building Equipment

Thermostats

Electronic Programmable Thermostats

\$30.00-\$200.00 ea.

Programmable thermostats can help save energy by automatically turning off the heat/AC when not needed.

Electronic programmable thermostats are widely available.

Switches

Make sure equipment containing mercury **switches** is clearly marked. When purchasing new equipment, specify non-mercury components. Types of non-mercury switches include hard-contact, solid-state, electro-optical, inductive sensor, capacitive sensor, and photoelectronic sensor.

Septronics
Virge Einck
888-565-8908
www.septronicsinc.com