

HIGHER EDUCATION CHEMISTRY

LAB EQUIPMENT FOR
UNDERGRADUATE LABORATORIES



PASCO



TABLE OF CONTENTS

page	04	PASCO Technology
------	----	---------------------

page	08	Introducing: Chemvue App
------	----	-----------------------------

page	12	Optimizing Your Lab
------	----	---------------------

page	14	Spectrometry
------	----	--------------

page	19	Polarimeter Polarizer
------	----	--------------------------

page	20	Conductivity Voltage Current
------	----	------------------------------------

page	22	Melting Point
------	----	---------------

page	24	pH Drop Counter Temperature
------	----	-----------------------------------

page	26	CO ₂ O ₂ DO ₂
------	----	--

page	28	Pressure Ideal Gas Law Zero Sphere
------	----	--

page	30	Heat Engine Wave Driver
------	----	----------------------------

page	32	Geiger Counter
------	----	----------------

page	34	Hot Plates Balances Equipment
------	----	-------------------------------------



055-670
wireless pH
(pH/ISOPH)

UNITED
250 mL
BG 1000
MADE IN INDIA
APPROX VOL

LAB GLASS
400ml
APPROX VOL



why choose **PASCO Technology** for your chemistry lab

Top-Tier Science Lab Equipment & Teacher Resources

Powered by PASCO

PASCO scientific encompasses 60 years of innovation in science education and lab instrumentation, including data collection and analysis software. With humble beginnings as a science fair project, we have grown into a trusted source worldwide for high quality teaching tools.

Our award-winning, hands-on science tools and datalogging solutions connect your students directly to chemistry concepts with classroom technology such as sensors, interfaces, and data collection and analysis software. We also design and manufacture high quality lab equipment for physics and engineering, and offer curriculum solutions (textbooks, e-books, and integrated lab technology) across the fields of sciences.

Innovative Technology

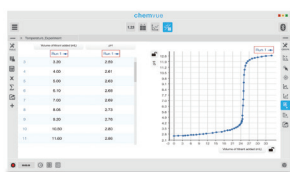
Innovation is essential to our success. PASCO engineers, educators, and researchers collaborate to design products that leverage technology to keep the focus on learning. They examine the learning process and design tools to facilitate a better lab experience with hardware and software that is intuitive, user-friendly, and durable.

Investigate these core chemistry concepts
with PASCO's innovative technologies.



Data Collection Software

PAGE 10

**Datalogger**

PAGE 20

**Spectrometry**

PAGE 14

**Polarimetry**

PAGE 19

**Conductivity**

PAGE 20

**Acids, Bases, Oxidations, and Reductions**

PAGE 24

**Electrochemistry**

PAGE 21

**Gases / Gas Laws**

PAGE 28

**Titration**

PAGE 24

**Thermodynamics**

PAGE 25

**Melt Temp Apparatus**

PAGE 22

**Equipment / Supplies**

PAGE 34



Create the optimal chemistry lab experience with PASCO's new dedicated chemistry application & instrumentation.

Informed UI/UX & Feature Design:

Designed in collaboration with college chemistry professors.

Innovative Technology Integration:

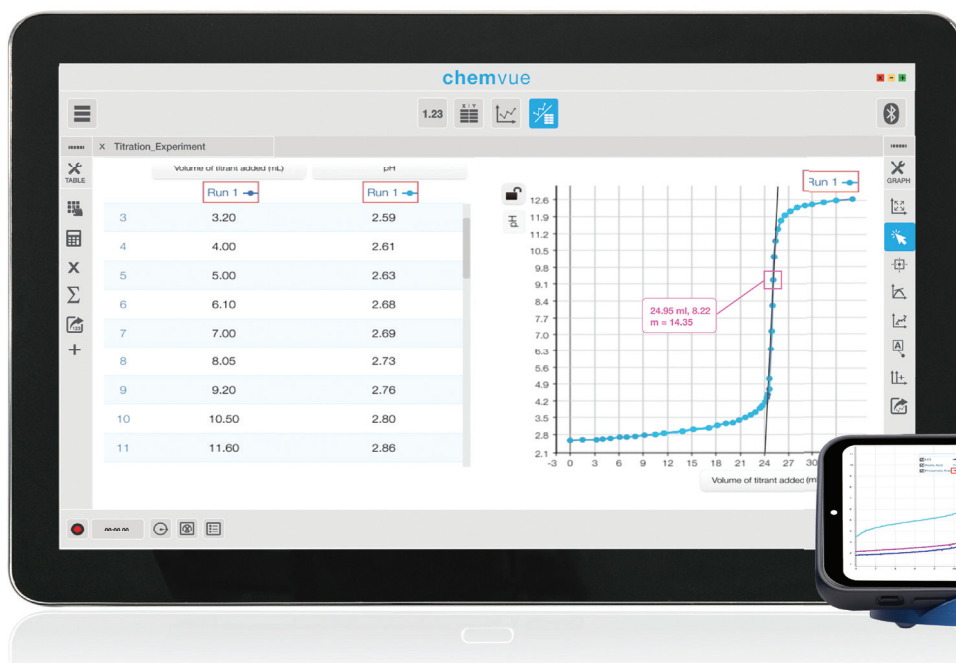
Engineered with state-of-the-art data collection and lab reporting.

Improved Investigation & Analysis:

Envisioned to improve lab efficiencies and student learning.

LEARN MORE

Learn about PASCO's new chemvue application as well as our chemistry lab solution set—including wireless probes and equipment—by scanning the QR code provided.



The introductory version of chemvue will be available for Windows® only.

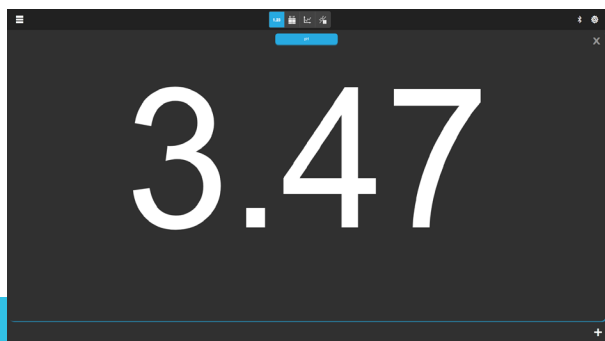
Android™, macOS, and iOS versions coming soon.



chemvue

INTUITIVE INTERFACE & THOUGHTFUL DESIGN

Chemvue's intuitive interface allows you to capture, visualize, and calculate relationships between variables. Easily navigate between Chemvue's 4 primary screens (digits, tables, graphs, and table/graph combo) for thorough investigation of your data set.

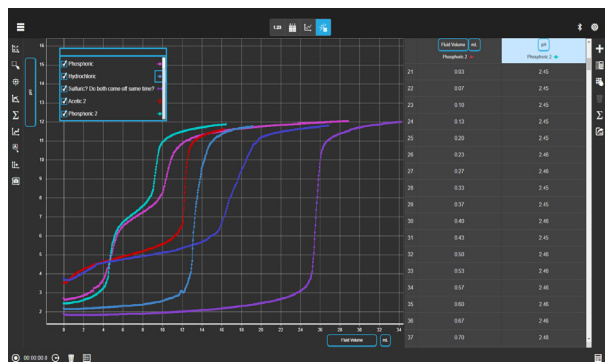


LIVE DATA MODE

Live data reading begins instantaneously upon probe pairing, enabling you to confirm your probes are calibrated before the experiment begins. Plus, live data is stored up to ten minutes, giving you the option of statistical analysis without having to set up a run.

ANALYSIS

Choose from a menu of analysis tools, including ten different curve-fit models, to explore inherent relationships within your data set.



AUTO-RECOGNITION

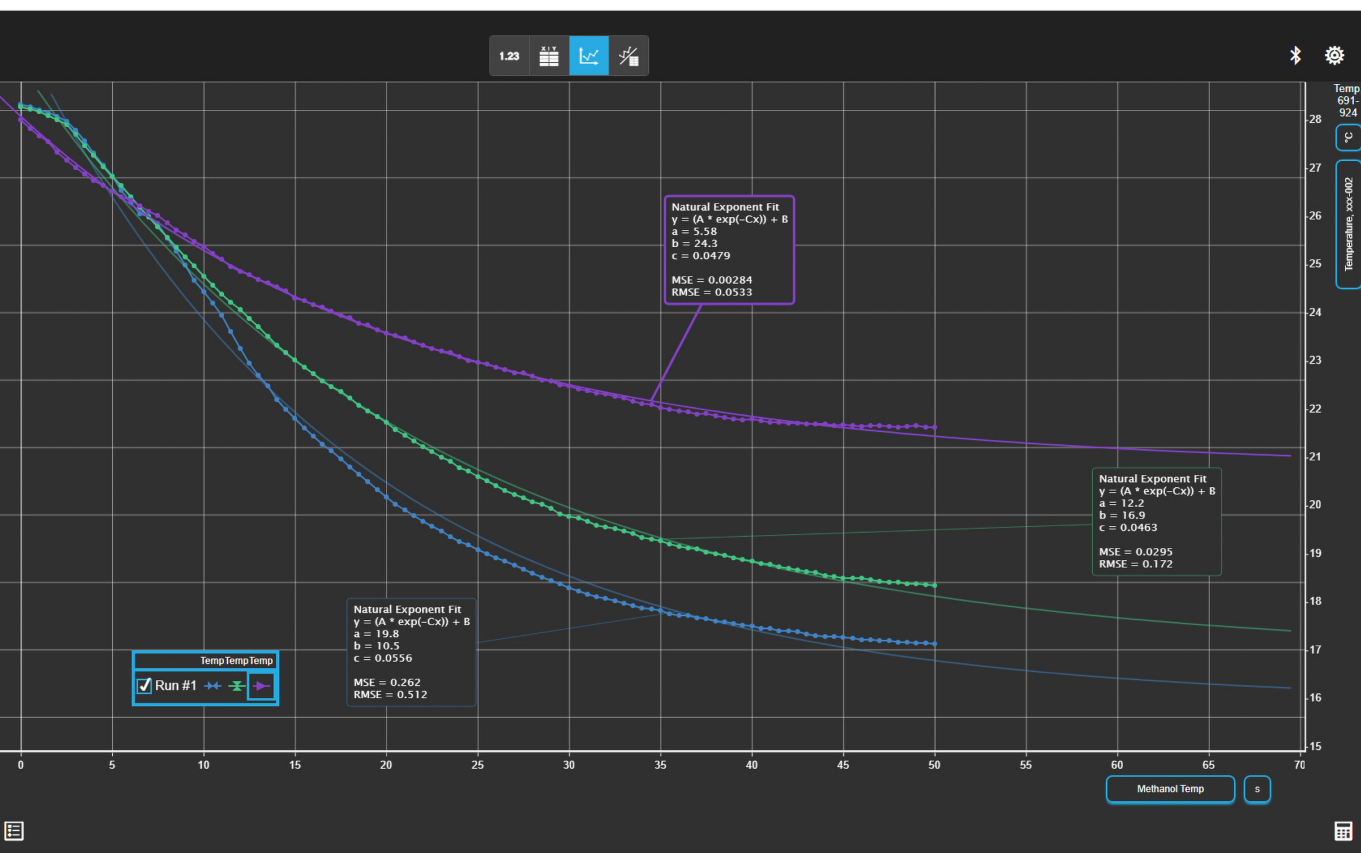
Chemvue recognizes and auto-configures an appropriate page setup based on the device you connect.

Did you connect PASCO's Wireless pH Sensor and Drop Counter? Chemvue recognizes you want to run a titration, and prepares a graph with pH vs. Volume. Auto-configuration also applies to our spectrometers, colorimeter, Geiger counter, and melt point apparatus.



Along with sensor data, Chemvue also permits user-entered data for graphing and analysis. Display up to four variables on the y-axis for comparison, easily swap variables on graph axes to explore new relationships, and select specific data (or all) to run analyses on.

Chemvue's live data collection provides real-time feedback so you can correct mistakes in your procedure as they occur, optimizing lab time. When the lab is done, students can easily export tables (CSV format) and graphs (PNG format) for further independent study, collaboration, and to complete lab writeups.



Interested in trying Chemvue today? Become a beta-tester and apply it in your own lab!
Visit pasco.com/chemvue to sign up.

Don't want to wait for the full Chemvue version to launch? We got you covered.

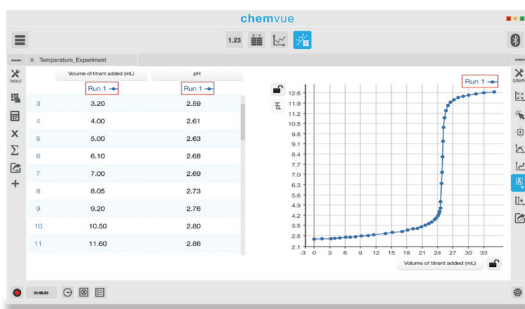
Download SPARKvue, our award-winning, cross-platform, data collection and analysis software. SPARKvue is available today and works with all PASCO sensors on virtually any device. Go to pasco.com/sparkvue for more information.

OPTIMIZING AND STREAMLINING

Wireless data collection and analysis enhances your lab so students produce accurate and consistent results regardless of lab time restraints.

1 LAUNCH CHEMVUE®

Introducing our easy-to-use, cross platform intuitive solution with powerful analysis tools available when—and where—you need them. Chemvue is designed for all chemistry courses and focuses on ease of use for common data collection and analysis tasks.




BLUETOOTH
CONNECTED

2 CONNECT WIRELESS SENSORS AND COLLECT DATA

Simplify your lab setup with wireless Bluetooth connection built-in to our sensors. Connect multiple devices to Chemvue simultaneously and watch as data streams in real-time!

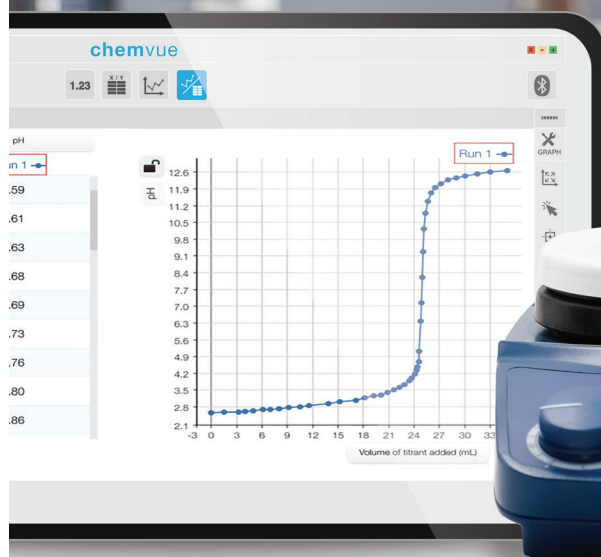


3 EXPORT AND SHARE DATA FOR ANALYSIS

Promote student collaboration with export options at the click of a button. Chemvue supports the sharing of CSV and PNG data and images, allowing students to share, analyze, and writeup their labs on any device with any software.



Investigations like titrations are made simple with PASCO.



Build your own titration solution. See page 24 for sensors, and page 34 for heater/stirrer and equipment.

SPECTROMETRY

Compare features and capabilities to find the right instrument for your lab.



Colorimeter & Turbidity
PS-3215



Wireless Spectrometer
PS-2600A



UV-Vis Spectrometer
SE-3607

Feature	Colorimeter & Turbidity	Wireless Spectrometer	UV-Vis Spectrometer
Light Source	White LED	RGB LED-Boosted Tungsten	Deuterium (UV)
Optical Resolution	±25 nm	3 nm	1 nm
Wavelength Range	450, 500, 550, 570, 600, 650 nm	390 – 950 nm	180 – 1050 nm
Scan Time	N/A	1 ms - 25 s	1 ms - 25 s
Bluetooth	Y	Y	N

WIRELESS SENSOR FOR COLORIMETER & TURBIDITY

The Wireless Colorimeter & Turbidity Sensor can function as a turbidimeter or colorimeter and is capable of measuring absorbance and transmittance at six different wavelengths.

PS-3215 ▼

Product Specifications

Detection Range	±25 nm from peak
Absorbance	0–3 Abs units; useful range (0.05–1.5 Abs)
Transmittance	0–100%
Turbidity illumination wavelength	850 nm
Turbidity Range	0–400 NTU
Accuracy	±5% NTU
Peak wavelengths / Color detection	650 nm (red), 600 nm (orange), 570 nm (yellow) 550 nm (green), 500 nm (blue), 450 nm (violet)





WIRELESS SPECTROMETER

The Wireless Spectrometer measures emission spectra, intensity, absorbance, transmittance, and fluorescence. It easily connects to students' devices and utilizes free PASCO spectrometry software to display data and generate standard curves. Data is collected in under a second, making it ideal for undergraduate labs constrained by time and technological resources.

PS-2600A ▼

Product Specifications

Resolution	2–3 nm FWHM
Cuvette Material	0–100%
Detection Range	390–950 nm
Photometric Range (Best Accuracy Range)	0.1 to 1.0 (full range from 0.0 to 3.0)
Fluorescence Excitation Wavelengths	405 nm and 500 nm
Industry Standard Cuvette Size	12 x 12 x 45mm, 10mm inner path
Light Source	LED-boosted tungsten
Connectivity	Bluetooth BLE or mini USB



SPECTROMETRY

UV-VIS SPECTROMETER

SE-3607 ▼



Product Specifications

Dimensions	19.5 × 24.5 × 7.0 cm
Light Source	Deuterium (UV) Tungsten (Vis)
Detector	2048 CMOS linear (0.3nm reporting interval)
Wavelength Range	180 – 1050 nm
Grating	500 lines/mm
Signal to Noise	2000:1
Optical Resolution	1.5 nm
Wavelength Accuracy	1.0 nm
Photometric Accuracy	±5%
Photometric Range	0.1 – 1.0 (reports full range 0.0 to 3.0)
Typical Scan Time	4 ms – 10 s
Connectivity	USB only
Power Consumption	2.5 A startup 350 mA continuous
Power Supply	100 - 240 VAC to 24VDC @ 2.5A
Warranty	5 year limited on hardware, 1 year on lamps

The PASCO UV-Vis Spectrometer is an easy-to-use, broad range spectrometer that delivers fast, accurate, and reliable performance for routine analyses in chemistry and biochemistry teaching labs.

Designed for lasting durability, the SE-3607 includes specialized features such as an internal drain that reduces the risk of damage from drips and an isolated optic bench that guarantees consistent accuracy over time (± 1 nm).

The PASCO UV-Vis Spectrometer is compatible with a wide range of sample vessels, including both square and round cuvettes of 1-cm pathlengths.

SUPPLEMENTAL EQUIPMENT / SUPPLIES

Order Information

UV Semi-Micro Volume Cuvette Set (Qty 10) SE-3610



UV Quartz Cuvette Set (Qty 2) SE-3611



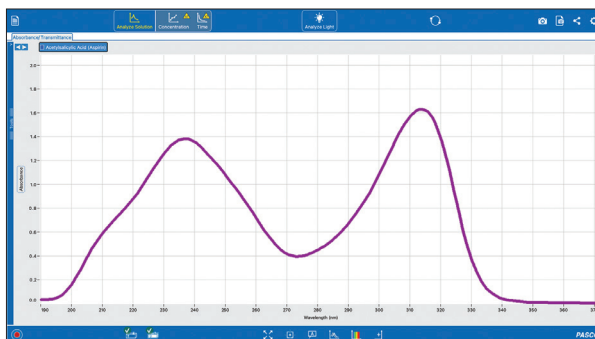
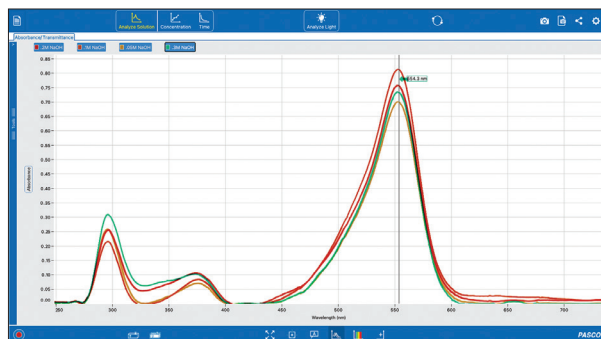
UV-Vis Fiber Optic Kit SE-7182





Highly accurate spectrometer with broad range ultraviolet through visible light illumination for detailed spectroscopic techniques in chemical structure and concentration determination.

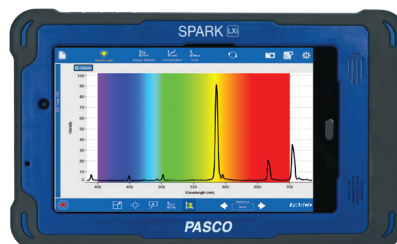
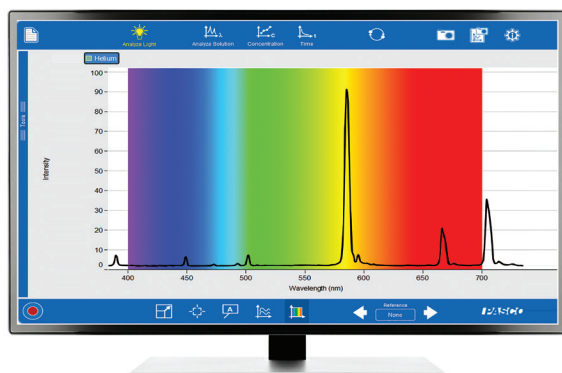
* **UV-Vis Spectrometer:** Includes a storage case, 10 semi-micro cuvettes, USB-B cable, and external 24 V power supply.



Explore the absorbance of solutions with various amounts of NaOH.

Analyze the amount of acetylsalicylic acid (ASA) in an aspirin tablet.

FREE SPECTROMETRY SOFTWARE



Download for **Windows®** and **Mac®**
Apps for **iPad®** and **Android™** tablets

PASCO's Spectrometry Software supports a wide range of applications with four preprogrammed displays.

Wavelength vs. Absorbance Mode

Analyze absorbance and transmittance, identify peaks, calculate molar absorption coefficients, and quickly select the best wavelength for further analysis.

Concentration vs. Absorbance Mode

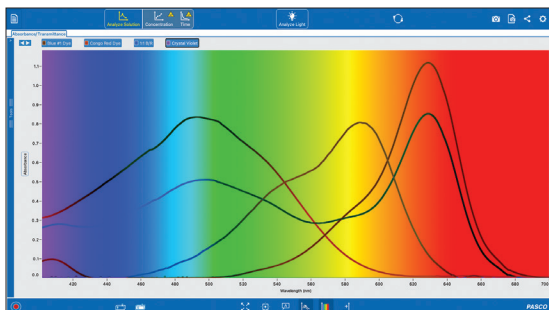
Students can easily investigate Beer's Law by determining the relationship between the absorbance vs. concentration data gathered from real solutions. They can then calculate a best fit line to determine unknown concentrations.

Time vs. Absorbance Mode

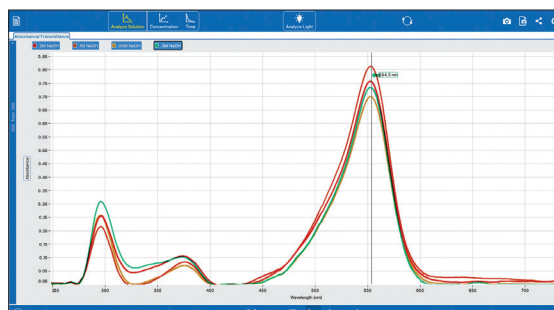
Simplify kinetics experiments by setting a sampling rate and bandwidth that's right for your reaction; transform your data to determine reaction rates with a single click using the built-in Quick-Calcs.

Wavelength vs. Intensity Mode

Use the optional Quartz Fiber Optic Cable Set to analyze the intensity of emissions spectra, measure light sources, or classify lasers.



Absorbance of various food dyes



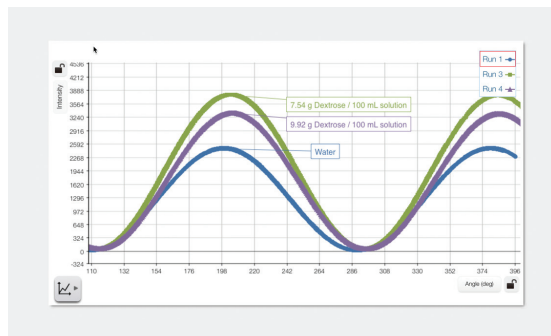
Spectrometry Screen for UV-VIS

POLARIMETER

PASCO's Wireless Polarimeter measures the optical rotation of chiral compounds and features Bluetooth® connectivity.



PS-3237 ▲



BLE Bluetooth® and USB connectivity allows collection to any computing platform.

The Wireless Polarimeter has both Bluetooth® and USB connectivity, making it possible to analyze chiral compounds with your iPad®, Chromebook™, Android tablet, or computer. It is ideal for introductory experiments in organic and biochemistry where chiral compounds are of special interest. Study sugars, amino acids, or compounds using L- or D- notations in their names (enantiomers).

Product Specifications

Connectivity	Bluetooth and USB	Optical Rotation Accuracy	$\pm 0.09^\circ$	Cell volume	12 ml
LED light source	589 nm	Cell Length Range	101.3mm $\pm$ 0.8mm		

POLARIZER DEMONSTRATOR

These large (19-cm diameter) polarizers are perfect for polarization demonstrations. Each polarizer has a rigid plastic frame that has angle markings in 5° increments. The polarizers can be hand-held or fit into a stand that allows the polarizer to be easily rotated by hand.

Any light source can be used, but the experiment works especially well with the Color Mixer (OS-8496).

To demonstrate optically active materials that rotate the angle of polarization an amount that depends on the wavelength of the light, add the Polarization Demonstration Accessory (OS-8172).

OS-9477A ►



Demonstrate the effect of crossed polarizers with these large round polarizers.

WIRELESS CONDUCTIVITY



This waterproof sensor connects via Bluetooth® to measure both conductivity (ionic content in solution) and total dissolved solids.

▼ PS-3210A



Product Specifications

Range	0 to 40,000 $\mu\text{S}/\text{cm}$ (0 to 25,000 mg/L TDS)
Accuracy From 200 $\mu\text{S}/\text{cm}$ to 40,000 $\mu\text{S}/\text{cm}$	$\pm 5\%$ of value
Accuracy Below 200 $\mu\text{S}/\text{cm}$	$\pm 25\%$
Total Dissolved Solids Accuracy	Yes
Connectivity	10% between 100–10,000 ppm
Resolution	0.1 $\mu\text{S}/\text{cm}$
Response Time	95% of final reading in 5 seconds or less
Probe Environmental Tolerance (Min-Max)	0–80°C
Temperature Compensation	0–35°C
Temperature Accuracy	$\pm 0.5^\circ\text{C}$
Probe Material	The probe is composed of 300 series stainless steel and glass filled polypropylene
Waterproof	IPX7 rated (1 meter for 30 min)
Battery Life	>1 year (3V, CR2032)

VOLTAGE

Easily record voltage data while exploring fundamental circuit concepts, electrochemical batteries, and so much more.

PS-3211 ▶

Product Specifications

High Setting Range	± 15 V
Low Setting Range	± 5 V
Resolution	2 mV (± 5 V range); 7 mV (± 15 V range)
Accuracy	$\pm 1.0\%$
Maximum Sampling Rate	100 kHz
Input Resistance	0.1 Ω

CURRENT

The Wireless Current Sensor facilitates introductory and advanced explorations of the fundamental concepts of electricity and basic circuits.

PS-3212 ▶

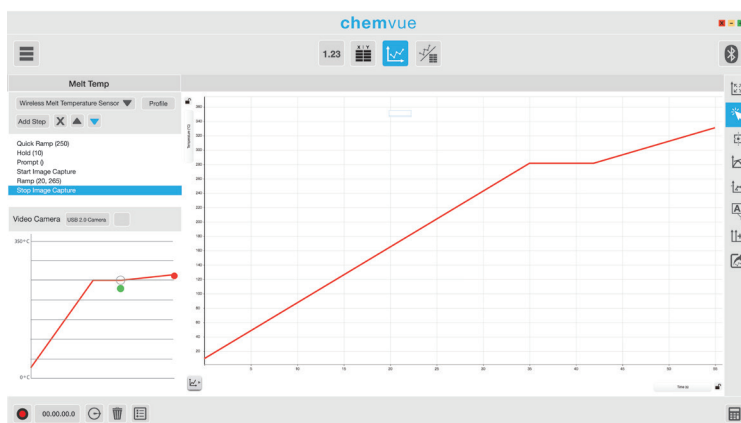
Product Specifications

High Setting Range	± 1 A
Low Setting Range	± 0.1 A
Resolution	0.2mA (± 1 A range); 0.02mA (± 0.1 A range)
Maximum Sampling Rate	100 kHz
Input Resistance	0.1 Ω



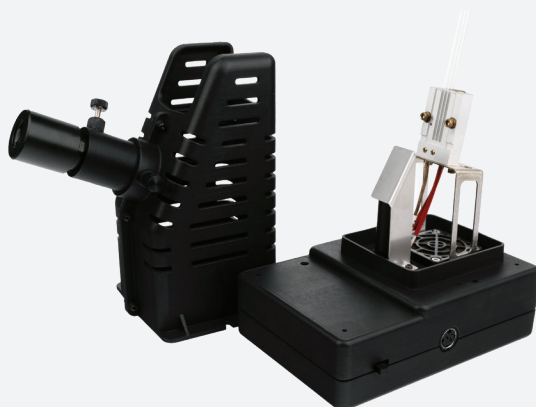
MELTING POINT APPARATUS

PASCO's Melting Point Apparatus is an efficient and cost-effective instrument for accurately determining the melting point of a substance. This apparatus allows for rapid, consistent, and reliable melting point determinations. When coupled with PASCO's dedicated chemistry software, students enjoy real-time data collection, visualization, and analysis. With the optional camera accessory, melting point video can be captured in sync with data collection for visual confirmation of the phenomenon.



Temperature data is sent wirelessly to PASCO's data collection and analysis software so students can see when melting begins and ends.

KEY BENEFITS



AVAILABLE
WINTER 2024



Built-in (magnifying) eyepiece allows students to observe the melting process. A USB camera can be mounted (as shown) to record the process in real-time for viewing on a computer.



Variable ramp rates allow you to quickly raise sample temperature near melting, then slow the rate to ensure more accuracy.



Hold temp command ensures all substances reach a uniform temperature before adjusting to a slower ramp rate.



Built-in temperature sensors allow you to monitor and control the sample temperature.



Cooling fan quickly cools down the heating block after each measurement and automatic shut-off mechanism prevents overheating or damage to the instrument.



Heating block has plastic cover to protect the user; cover is easily removed for cleaning.



Connects through Bluetooth®
(Camera connects USB).



PH

The Wireless pH Sensor (PS-3204) monitors the pH of aqueous solutions and can transmit data to your device in real-time, or store it to the sensor's onboard memory for long-term experiments.

▼ PS-3204



The Wireless pH Sensor connects via Bluetooth® to monitor the pH of solutions. It's the best tool for measuring pH since litmus paper.

Product Specifications

Range	0-14 pH
Resolution	0.02 pH
Accuracy	±0.1 pH with calibration
Logging	Yes
Connectivity	Bluetooth 4.0
Temp Range	5°C–60°C

DROP COUNTER

Use the new Wireless Drop Counter for more efficient and accurate titration data. Our Wireless Drop Counter automatically records titrant volumes to improve the efficiency of acid-base titrations. Conducting a titration has never been easier!

▼ PS-3214

Product Specifications

Maximum Drop Count Rate	40 Drops/ second
Exterior Case	ABS Plastic
Optical Window	Acrylic



Able to measure up to 40 events per second with drops as small as 0.5 mm.

TEMPERATURE

Welcome to the modern thermometer.

The Wireless Temperature Sensor transmits live data and permits students to continuously monitor, log, and plot temperature measurements on nearly any device.

When lab time ends but the experiment continues, students can set the sensor to log data autonomously for days, weeks, or months, then download it for analysis later.

This durable, wireless sensor features a stainless steel probe for the most demanding of applications, as well as a battery that lasts over a year with regular lab use. It can be used in a wide array of experiments and activities because it measures small but significant temperature changes produced by chemical reactions, convection currents, and even skin temperatures.

▼ PS-3201



Perform These Experiments

- Explore freezing and melting points
- Study endothermic and exothermic reactions
- Measure the energy content of food
- Monitor environmental conditions and water quality
- Observe intermolecular forces and evaporative cooling

Product Specifications

Range	-40°C – 125°C
Resolution	0.01°C
Accuracy	0.5°C
Logging	Yes
Connectivity	Bluetooth 4.0

Equal mass metals are perfect to illustrate heat exchange and calorimetry due to changing specific heat capacity of each substance. It is a great lab to build a foundation for understanding temperature, heat, and calorimetry before advancing to heats of reaction, Hess's Law, and Thermodynamics. This experiment uses PASCO's Basic Calorimetry Set (TD-8557B).

WIRELESS CO₂ SENSOR

▼ PS-3208



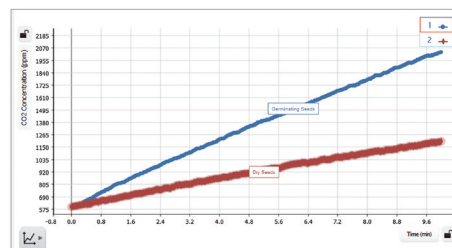
Measure changes in carbon dioxide (CO₂) gas levels quickly and easily with the Wireless CO₂ Sensor. The sensor is temperature-compensated and can operate in high humidity environments. Probe is water-resistant with waterproof sleeve so the tip can be immersed to determine CO₂ concentrations in solution. With the ability to store more than 55,000 data points, this sensor enables studies to run overnight or throughout an entire weekend, making it ideal for long-term carbon cycling investigations. The included 250-ml sample bottle supports analyses with multiple gas sensors.

Features

- Logging ability for long-term experiments; store up to 55,000 data points
- Integrated stopper for use with included sample bottle and common glassware
- Temperature-compensated for accurate results

Product Specifications

Range	0 to 100,000 ppm
Resolution	2 ppm
Connectivity	Bluetooth 4.0 or USB
Battery Life	≥18 hours of continuous use
USB Connector Type	Micro USB
Accuracy	0 - 1,000 ppm: ±100ppm 1,000 - 10,000 ppm: ±5% of reading +100ppm 10,000 - 50,000 ppm: ±10% of reading 50,000 - 100,000 ppm: ±15% of reading
Warm-up Time	3 min
Response Time	90% in 30 sec
Operating Temperature Range	-10°C–50°C (5°C to 30°C ideal for LiPo charging)
Metabolism Bottle Volume	250 mL
Metabolism Bottle Care	Warm soapy water (not boiling)



WIRELESS O₂ GAS SENSOR

▼ PS-3217



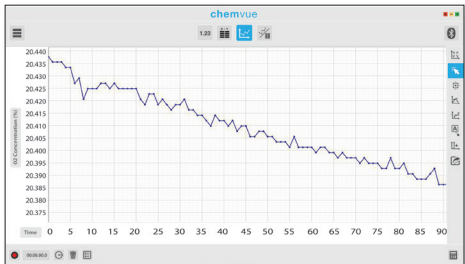
Product Specifications

Range	0–400 kPa
Resolution	0.1 kPa
Accuracy	±2 kPa
Logging	Yes
Connection Jack	3.5 mm stereo
Logging	Yes
Max Sample Rate	1000 Hz
Connectivity	Bluetooth 4.0

The Wireless Oxygen Gas Sensor measures gaseous O₂ concentration as well as humidity and air temperature for a range of conditions for loss of oxygen.

Features

- Bluetooth® and USB connectivity
- 0-100% oxygen gas concentration
- ±1% oxygen at constant temperature and pressure
- Also reports ambient temperature and humidity
- 2-3 year operating life with replaceable sensing element



Monitor the Pressure digit display while live data is graphed in real-time as steel wool reacts with oxygen.

WIRELESS OPTICAL DO₂ SENSOR

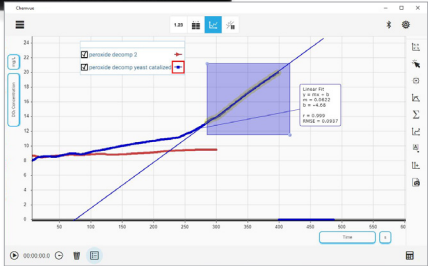
This sensor is perfect for the live or long-term monitoring of dissolved oxygen concentration and saturation, in both the lab and field.



PS-3246 ▼

Product Specifications

Dissolved Oxygen Range	0 to 20 mg/L, 0 to 300% saturation
Accuracy - with user calibration	±0.2 mg/L or 1% (whichever is greater)
Accuracy - out of the box	±0.5 mg/L or 3% (whichever is greater)
Response Time	90% in 45 sec
Measurements	Concentration (mg/L), Saturation (%), O ₂ Gas (in air, qualitative) (%), Temperature (°C)
Waterproof Depth	10m (30ft)



Single grain of yeast in 50 ml of 3% peroxide. Second yeast grain doubles original rate.

WIRELESS PRESSURE SENSOR

Intuitive, intelligent technology to keep you connected.

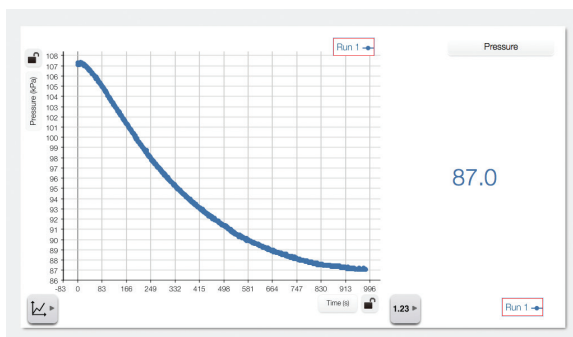
▼ PS-3203



The Wireless Pressure Sensor allows students to easily collect accurate gas pressure data for a wide range of applications. Included is a 60-cc syringe, tubing, and connectors that facilitate investigations such as Boyle's Law, measuring pinch-grip strength, and determining hydrostatic pressure in water. Within PASCO software, students can easily select their desired units from a list containing kPa, mmHg, inHg, mbar, psi, atm, and torr.

Features

- Absolute pressure sensor allows for low pressure studies (sound of alarm in bell jar)
- Rugged enough to follow gas law pressure / volume studies up to 4 atm
- Supports common units (kPa, atm, psi, mmHg, or N/m^2) for many applications
- Bluetooth® connectivity and long-lasting rechargeable battery



Product Specifications

Range	0–400 kPa
Resolution	0.1 kPa
Accuracy	± 2 kPa
Logging	Yes
Connection Jack	3.5 mm stereo
Logging	Yes
Max Sample Rate	1000 Hz
Connectivity	Bluetooth 4.0

Monitor the pressure digit display while live data from the reaction of steel wool and oxygen is plotted in real-time.

IDEAL GAS LAW APPARATUS

Students can quantitatively look at the relationships between pressure, temperature, and volume.

Demonstrating the Ideal Gas Law is simple using PASCO's Ideal Gas Law Apparatus. By connecting a pressure sensor and a temperature sensor to the syringe, students can quantitatively look at the relationships between pressure, temperature, and volume.

Product Specifications

Battery Life	>1 year
Maximum Sampling Rate	20 Hz
Range with Included Probe:	-35 °C to 135 °C
Connection Jack	3.5 mm stereo
Logging	Yes
Accuracy	± 0.5 °C
Resolution	± 0.05 °C



PS-3310 ▲

ABSOLUTE ZERO SPHERE

The Absolute Zero Sphere is an effective tool for determining absolute zero temperature. Connect pressure and temperature sensors before immersing the sphere in water baths of varying temperatures. As the pressure and temperature change, a live graph is generated in chemvue. Once the data is collected, students can use a linear fit to extrapolate the value of absolute zero.



PS-3309 ▲

Product Specifications

Battery Life	>1 year
Maximum Sampling Rate	20 Hz
Range with Included Probe:	-35 °C to 135 °C
Connection Jack	3.5 mm stereo
Logging	Yes
Accuracy	± 0.5 °C
Resolution	± 0.05 °C

HEAT ENGINE AND GAS LAW APPARATUS

Intuitive, intelligent technology to keep you connected.

The Heat Engine and Gas Law Apparatus enables students to perform quantitative Ideal Gas Law experiments while exploring a functional heat engine. A Rotary Motion Sensor and Pressure Sensor can be added to graph heat engine cycles, determine actual efficiency, and more!

Product Specifications

Piston diameter	32.5 mm
Maximum piston displacement	≈10 cm



▲ TD-8572A

WAVE DRIVER

Use a signal generator to drive this oscillator for wave and oscillation experiments.

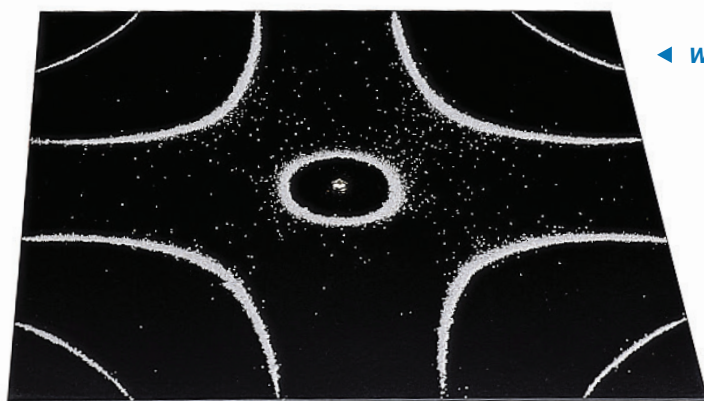
Our newly redesigned Wave Driver offers improvements in driving force and amplitude as well as a built-in string guide so tiny parts don't get lost. It is ideal for vibrating waves in a string, driving Chladni plates to show the vibration modes, or to demonstrate resonance vibrations.



WA-9855 ▼

Product Specifications

Frequency Response	0.1 to 5000 Hz
Driving Signal Required	Requires a function generator with a minimum of 8 V at 0.5 A.
Maximum Current	1.2 Amps AC
Accessory post inside diameter	4 mm
Accessory post threaded hole	6-32
Mass	1.8 kg
Dimensions	16cm (w) x 11 cm (d) x 12 cm (h)
Fuse	1 Amp (5ET1-R)
Type	Voice coil



◀ WA-9607

◀ WA-9855



WIRELESS GEIGER COUNTER

The PASCO Wireless Geiger Counter counts beta, gamma, and alpha radiation particles as they enter the Geiger–Müller detector tube inside the counter. Designed for easy mounting, the Geiger Counter provides superior position control in inverse square law labs, as well as an audible beep to indicate the detection of ionizing radiation. The front plastic snout fits conveniently inside the NU-3344 Sample Holder stand (available separately).

With the Wireless Geiger Counter, students can wirelessly control the high voltage supplied to the Geiger–Müller tube inside the counter, enabling them to make measurements of counts/interval for different tube voltages. They can also plot counts/interval versus tube voltages to experimentally observe the Geiger plateau characteristics of the tube.

Applications

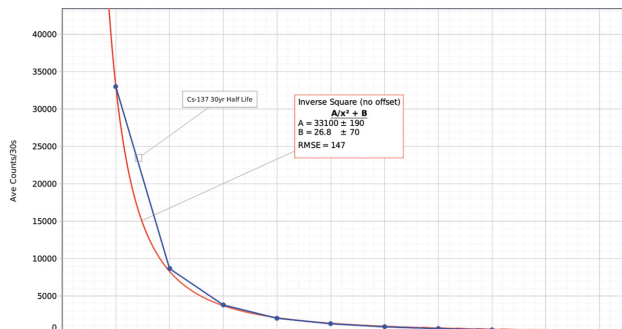
- Observe the inverse square law
- Measure the Geiger plateau associated with a Geiger–Müller tube
- Demonstrate the shielding properties of different materials and different types of ionizing radiation



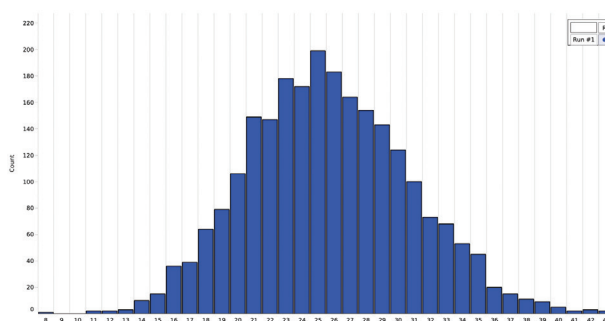
▲ PS-3238

Product Specifications

Sensitivity	Alpha, Beta, Gamma
Count Detection	Switchable audio signal
Gas Filling	Ne +Halogen
Effective Tube Diameter	9.1 mm
Window Thickness	1.5 to 2.0 mg/cm ²
High Voltage Control Range	150 VDC to 650 VDC
Standard Operating Voltage	250 mL



Measure counts/interval from a radioactive source at various distances to explore the inverse square law.



Demonstrate the statistical (Gaussian or Poisson) nature of counts/interval measured from a radioactive source with long half-life.

EQUIPMENT & SUPPLIES

HEATER / STIRRER

This compact hot plate and stirrer has a white ceramic top that is ideal for heating and seeing color changes when mixing solutions. It is designed to withstand spills, has safety features including warning labels and indicator LEDs, and the included rod makes it easy to support sensors.



PS-3401 ▲

When used as a heater:

This compact Heater-Stirrer can boil water in minutes. The ceramic top provides an even heating surface and the indicator LEDs let you know when the top is hot.

When used as a stirrer:

This new apparatus is great for mixing solutions. The white top makes color changes easily visible during titrations.

BALANCES



SE-8756 ▲

The Scout SKX balance from OHAUS combines range, resolution, and low cost, making it ideal for teaching labs.

Available in 220g, 420g, 2200g, and 8200g capacities.



◀ SE-8860

Luna precision balances can meet diverse weighing needs in a variety of labs. Its range offers improved performance for faster, more accurate readings.

Suitable for international use and multilingual display capability

OTHER EQUIPMENT

Glassware ▶



SE-7288



SE-7287



SE-7289



PS-3505



PS-3519



PS-3517



SC-3527

◀ ISE Solutions

- Ammonium
- Carbon Dioxide
- Potassium
- Calcium
- Chloride
- Nitrate

▶ Ion Selective Electrode Support

- Ammonium Ion
- Carbon Dioxide Ion
- Calcium Ion
- Chloride Ion
- Potassium Ion
- Nitrate Ion

Clamps / Rods / Stands ▼



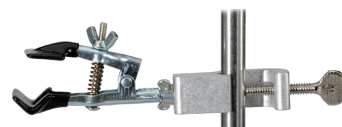
▶ 25 cm Rod
ME-8988



▶ Round Base
ME-8270

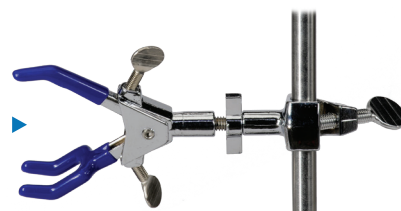
Test Tube-Utility Clamp ▶

SE-9446



Three-Finger Clamp ▶

SE-9445



Capsule Solutions ▼

SC-2321



Right Angle Clamp ▶

SE-9444





SOFTWARE / SENSORS / AND INSTRUMENTATION

10101 Foothills Blvd
Roseville, CA 95747-7100

+1 916-786-3800
800-772-8700
www.pasco.com

Global Coverage & World-Class Support

Our global network of factory-trained partners are science specialists, who are knowledgeable about PASCO solutions. Contact our team today to see how PASCO can update your labs and provide value for years to come.



Live Contact Hours:
M–Th: 7:00 am–4:30 pm
F: 7:00 am–2:00 pm
Pacific Time



Phone:
US Calls: 800 772 8700 ext. 1004
INT Calls: +1 916 786 3800
Fax: 916 786 7565



Mail:
PASCO Scientific
10101 Foothills Blvd.
Roseville, California
95747-7100 USA
ISO 9001:2015 Certified



Email:
support@pasco.com



Web:
Get quotes and order online
pasco.com



Chat on pasco.com

Find Your Local Representative pasco.com/support