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**CONFIDENCE
EXPERIENCE**

Q-SWEAT™

QUANTITATIVE SWEAT MEASUREMENT SYSTEM, MODEL 1

Provides Precise Measurement of Sweat Output from Skin

The Q-SWEAT™ (Quantitative Sweat Measurement System) quantifies human skin sweat output. This patented device precisely measures sweat rate and volume via a closed chamber that is affixed to the skin and displays the data in real time in an easy-to-read, Windows®-based graphical user interface.

Developed by leading researchers, the Q-SWEAT™ device uses room air, is compact, and can be used with a variety of sweat vapor chambers to alter the size of the surface collection area. The measurements are highly accurate, repeatable, and easy to perform. The device can be operated by any technician with minimal training.

FEATURES:

- Highly accurate, specific, and repeatable
- Four-channel system allows concurrent measuring of multiple sites
- Integral dry air source
- No special gasses required; uses room air
- Self calibrating
- Convenient to operate
- Compact and portable
- RS-232 interface
- Easy to interface to personal computers
- Can be integrated with the WR TESTWORKS™ cardiac modules and quantitative sensory testing (QST) CASE IV™ System modules

COMPONENTS:

- Furnished with the WR TestWorks operating software
- Personal computer (laptop or desktop available)
- Main unit (model 1 with external National Instruments DAQPad 6020E or equivalent PCI or PCMCIA card)
- Moisture sensor assemblies (4), which may be used with various sizes of vapor collection chambers
- Moisture sensor parking fixture
- Air drying cartridge (desiccant pack)

Q-SWEAT™ IS A VALUABLE TOOL FOR:

- Clinicians
- Investigators
- Pharmaceutical companies
- Dermatological studies
- Cosmetics research

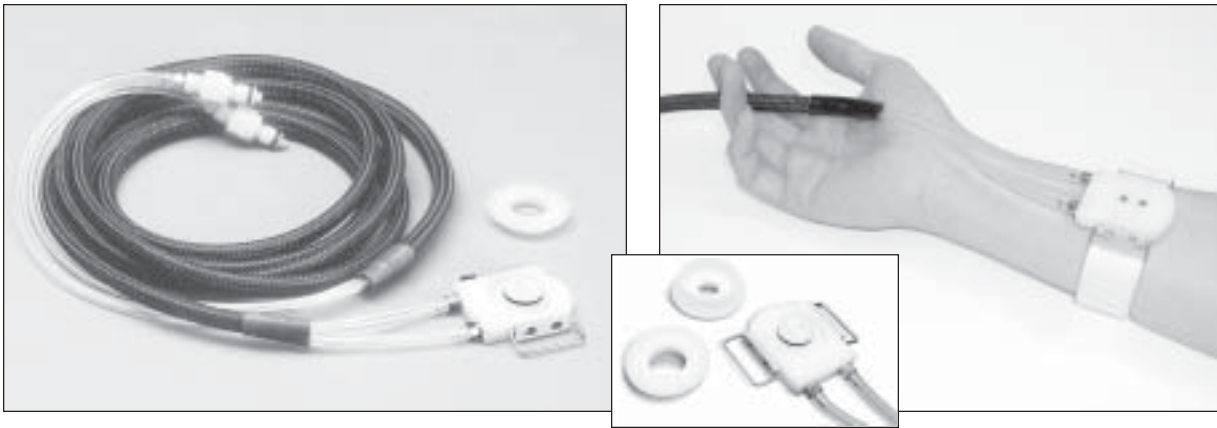


WR TESTWORKS™ OPERATING SOFTWARE:

- Provides a simple, semi-automated, graphical user interface (a “wizard” leads the user step by step through operation)
- Editable, multicolor traces
- Patient/test browser and database
- Individual channel windows
- Real-time rate and volume display
- Multiple event markers
- Time since last mark
- Capsule location tagging
- Automatic data point selection with manual override capability
- Reports in HTML
- Data export utility
- Flexible window scaling and sizing
- Signal input from other FDA-cleared devices such as the Colin 7000 or 9100, and chest expansion devices, etc., to acquire cardiac data
- Please see our WR TESTWORKS™ brochure for more details

Focusing on the Nervous System Since 1962

WR MEDICAL ELECTRONICS CO.



FAR LEFT: The versatile Q-Sweat™ moisture sensor assembly may be used with various sizes of sweat vapor chambers (inset) to alter the size of the collection area. Simply remove the white ring (shown to the right of the hose) to affix a new chamber.

LEFT: Moisture sensor assembly affixed to patient's arm.

Technical Information

SWEAT OUTPUT MEASUREMENT:

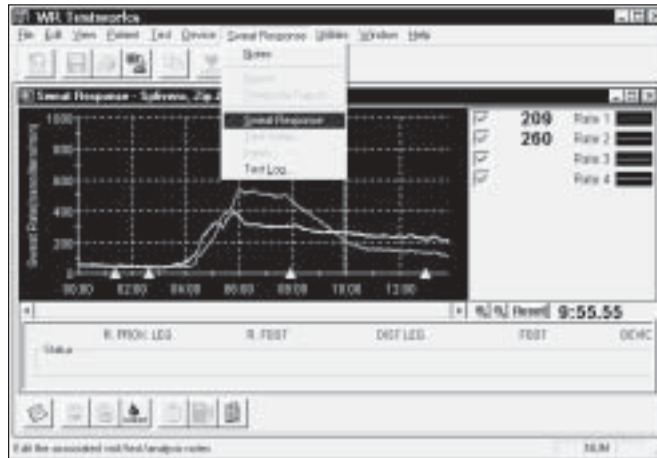
- Number of channels: 4
- Measurement method: direct vapor pressure calculation
- Measurement area (two chambers provided): 0.781 and 0.5 square cm.
- Dry air flow rate: 0.0–100.0 cubic cm. per minute
- Volume:
 - Range: 0.0–550.0 micromoles (0.0–10.0 microliters)
 - Accuracy: ± 5 percent
 - Repeatability: ± 5 percent
 - Sensitivity: 0.55 micromoles (0.01 microliters)
- Rate:
 - Range: 0.0–200 micromoles (0.0–3.63 microliters) per minute
 - Accuracy: ± 5 percent
 - Repeatability: ± 5 percent
 - Sensitivity: 0.01 micromoles (0.0002 microliters) per minute

ENVIRONMENT:

- Power: 90–240 VAC, 50/60 Hz, 100 watts
- Power consumption: Max. 240VA (2.0 amperes at 120 volts AC)
- Dimensions (W x H x D): 406.0 x 184.0 x 330.0 cm. (16.0 x 7.25 x 13.0 in.)
- Weight: 10.0 kg. (22.0 lbs.)
- Operating temperature: 10–35 degrees C. (50–95 degrees F.)
- Operational humidity: 30–75 percent

NOTES:

- U.S. Patent No. 6,269,265



LEFT: The Windows®-based graphical user interface features multicolor traces, individual channel windows, real-time rate and volume display, multiple event markers, automatic data point selection with manual override capability, a “wizard” that leads the user step by step through operation, and much more.

INDICATIONS FOR USE:

- The Q-SWEAT™ Quantitative Sweat Measurement System is designed to measure the sweat output of the skin of humans. This device does not make a diagnosis or indicate by itself that any disease state exists; it simply documents sweat output.
- Do not conduct this test on fragile skin.

WARNINGS AND CAUTIONS:

- Warnings: None.
- Cautions:
 - This device is restricted to sale by or on the order of a physician.
 - This device is to be serviced only by WR Medical Electronics Co. If servicing is done by any party other than WR Medical Electronics Co., the product warranty and/or safety or quality certifications could be invalid. Contact the factory for repair advice before attempting to repair.

SPECIFICATIONS FOR THE PERSONAL COMPUTER:

Any commonly available IBM-compatible desktop or laptop may be used:

- 1.2 GHz processor (recommended 1.5)
- 256MB RAM (recommended 512 MB)
- 10 GB hard disk (recommended 18 GB)
- CD-ROM drive
- Screen resolution 1024x768/64K color
- If laptop, screen size 12.1-inch (recommended 13.3)
- If desktop, screen size 17-inch or larger
- 1 serial communications port
- 1 parallel communications port
- 1 USB port
- Windows 2000 or XP running as a single-user system
- Internet Explorer 5.0+
- Removable storage device (100MB or more total backup space) such as an Iomega 250-MB Zip drive or CD-RW
- Inkjet printer (laser recommended)
- The appropriate communications card is added during system integration

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