



sweat testing

INNOVATIVE
ELECTRONICS
ENGINEERING
& DESIGN



Macroduct[®] / Sweat·Chek[™]

SWEAT TESTING SYSTEM

LABORATORY CF DIAGNOSIS

3700 / 3120

ELITechGroup
WESCOR[®]

MEDICINE ■ SCIENCE

LABORATORY OF DIAGNOSIS

Wescor is the world leader in products for the laboratory diagnosis of cystic fibrosis. The landmark Macroduct System has forever transformed sweat testing by eliminating the errors inherent in many previously used methods.

The sweat test has three phases: stimulation, collection, and analysis. Unfortunately, traditional sweat testing has often produced false diagnostic results due to intrinsic errors during collection and/or human error during analysis.

The Webster sweat inducer and Macroduct sweat collector provide a “pure” specimen of eccrine secretion for analysis, with the unprecedented advantage of visual quantitation of sweat as it is being collected. The Sweat-Chek Analyzer gives a simple and accurate analysis of the specimen. Together they form the Macroduct Sweat Testing System, which has been adopted by thousands of labs worldwide. It has become the new world standard.



Macroduct makes collecting an error-free sweat sample a simple reality. Sweat-Chek makes the analytical phase equally simple and reliable. The result is that routine neonatal testing is now considered practical.

Dr. Lewis Gibson (1927-2008), originator of the pad absorption method stated, “The primary reason I have advocated the Macroduct System is simply that I believe it is obvious that an accurate sweat test should be available in any hospital that admits children. Children with CF live longer if they are diagnosed early and to do this one must treat a lot of children with even slightly suggestive symptoms. To be blunt, Macroduct and Sweat-Chek can prolong lives.”

Macroduct is approved for sweat collection by the Cystic Fibrosis Foundation, and is rapidly replacing the pad absorption method everywhere. At last, with the complete Macroduct System, there is a method of sweat testing that is both accurate and simple.

Macroduct®/Sweat•Chek™

SWEAT TESTING SYSTEM

Stimulation, Collection & Analysis



Pilogel® Iontophoretic Discs

These unique gel reservoirs of pilocarpinium ions bring unprecedented simplicity and safety to the iontophoretic stimulation of sweat. There are no electrolyte solutions to prepare or to keep track of, and no messy electrolyte pads that must be saturated with separate solutions. Instead, a pilogel disc is simply inserted into each of the recessed stainless steel electrodes.



Webster Sweat Inducer

The Webster Sweat Inducer is an improved, lightweight unit that accomplishes pilocarpine iontophoresis simply by activating a start switch. It automatically delivers a safe and optimal quantity of pilocarpine for gland stimulation (equivalent to five minutes iontophoresis at 1.5 mA).



Sweat•Chek Analyzer

Interfacing perfectly with Macroduct, Sweat-Chek brings unprecedented simplicity and economy to the analytical phase of the sweat test.

A truly practical sweat testing system is now within the means of small hospitals, local clinics, or private practitioners. The Wescor method is simple, safe, and accurate.

While clinicians have traditionally used sweat chloride or sweat sodium ion assay, sweat conductivity has been shown to be an attractive alternative method of sweat analysis. It is a simple and reliable indicator to confirm or exclude the physician's clinical diagnosis of cystic fibrosis.

Referring to the Sweat-Chek Analyzer, Dr. Lewis E. Gibson said, "If this machine is kept clean, it gives results that are every bit as reliable as an analysis for sodium or chloride."

3700 / 3120

LABORATORY CF DIAGNOSIS

Specifications

Webster Sweat Inducer Model 3700

Iontophoresis Current	Profiled ramp up and ramp down, equivalent to 1.5 mA for 5 minutes (1.5 mA maximum)
Current Control	Fail-safe circuitry, controlled rate-of-change, circuit fault interrupt and alarm
Iontophoresis Electrodes	Stainless steel, recessed, color-coded
Power Supply	Two standard 9 volt batteries (ANSI c18.Im-1992)
Size and Weight	9.2 cm x 4.5 cm x 15.5 cm, 0.4 kg

To order complete sweat collection system, specify model number 3700-SYS. Consumable supplies are packaged in quantities for six (6) sweat tests. Each package contains 12 Pilogel discs, 6 Macroduct collectors and 6 sealable micro cups. Order catalog number SS-032.

Sweat-Chek Analyzer Model 3120

Minimum Sample Volume	6 to 10 microliters
Useful Range	0 to 150 mmol/L (equivalent NaCl)
Precision	2 mmol/L (equivalent NaCl) (1 S.D.)
Critical Range Linear Error	Less than 2 percent from 75 to 110 mmol/L
Warm-up Time	Approximately 2 minutes after power-up
Readout	3-digit LCD
Cell Operation Temperature	Approximately 39.5°C to ± 0.5 °C
Specimen Temperature Equilibration Time	10 seconds typical
Line Voltage (User Selectable)	115 V (100 to 120 V nominal) or 230 V(220 to 240 V nominal), 50/60 Hz
Power	Less than 10 W
Fuse	1/4 A time-delay type for 100/120 volts (2 required) 1/8 A time-delay type for 220/240 volts (2 required)
Size and Weight	10 cm x 20 cm x 16 cm, 1.0 kg

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