

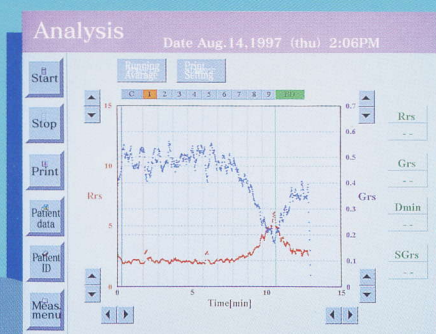


Airway Hyper-Reactivity Test System

ASTOGRAPH Jupiter 21

FOR DIAGNOSIS AND LONG-TERM MANAGEMENT OF BRONCHIAL ASTHMA.... MEASUREMENT OF AIRWAY HYPER-REACTIVITY WITH NORMAL BREATHING

Measuring airway hyper-reactivity is indispensable for the prompt diagnosis and treatment of bronchial asthma. CHEST M.I.'s successive ASTOGRAPHS have been popular since their first introduction in 1981 as clinical testing equipment that offer you an objective assessment of hyper-reactivity from the patient's normal respiration.



Sample Display
(Dose-response curve)

OBJECTIVE ASSESSMENT IN A SHORT TIME

Dose-response curves of respiratory resistance during inhalation of aerosolized drugs are monitored in real-time on the display.

Control value of resistance (Rrs cont), threshold of responsiveness (Cmin or Dmin), and rate of decrease of conductance (SGrS) are analyzed.



FEATURES

- Any oscillation frequency can be freely set manually in the range.
- No patient effort is required in the resistance measurement due to use of the oscillatory method.
- Nebulizers and flow circuit are detachable and easily sterilized.
- Artifacts in the waveform are automatically removed and corrected.
- SpO₂ monitoring is optionally available.
- The height of the patient interface is adjustable.
- Flow volume curve at normal respiration is also monitored together with dose-response curves.

ASTOGRAPH

Airway Hyper-Reactivity Test System

Jupiter21

APPLICATIONS

1. The early diagnosis of bronchial asthma.
2. Detection of airway hyper-reactivity resulting from respiratory disease.
3. Evaluation of the effectiveness of treatment for respiratory disease.
4. Detection of potential airway hyper-reactivity caused by air pollution.
5. Conducting research on the mechanisms involved in airway hyper-reactivity.
6. Screening tests for airway hyper-reactivity.

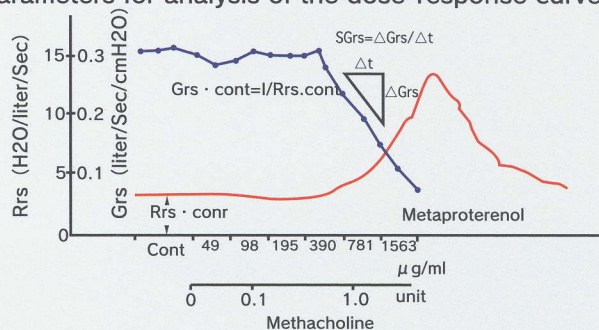
SPECIFICATIONS

Measuring method	: Oscillatory method
Pressure generator	: Loud speaker system
Frequency	: 3-10 Hz
Flow detection	: Pneumotach sensor
Pressure sensor	: Differential pressure transducer
Bias flow	: 0.25 L/s
Aerosol generator	: 12 nebulizers, Automatic/manual switchover.
Patient interface	: Automatic elevation(800-1200mm)
Computer	: 32 bit PC
OS	: Windows95
Printer	: Color inkjet
Power	: AC100-240V, 50/60Hz
Power consumption	: 330VA
Dimensions	: 1108 (W) x 720 (D) x 1420 (H)mm
Weight	: 100kg

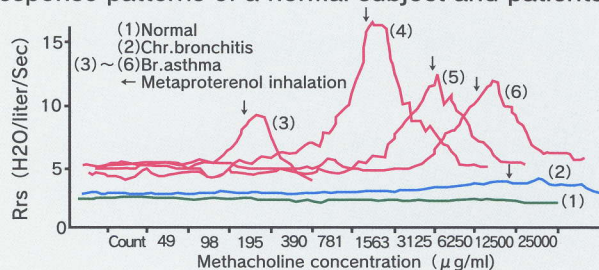
STANDARD ACCESSORIES

1. Nebulizer	13 pcs
2. Cheek balloon	1 set
3. Silicon mouthpiece	5 pcs
4. Nose clip	2 pcs
5. Calibration tube (Long/Short)	1 each
6. 3L calibration syringe	1 pc
7. Printer paper (A4)	100 pcs
8. Printer cartridge (Black/Color)	1 each
9. Operation manual	1 pc

Parameters for analysis of the dose-response curve



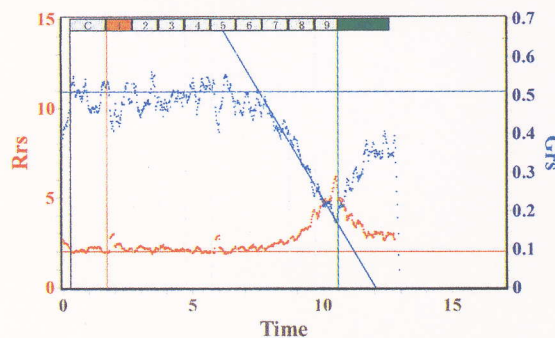
Response patterns of a normal subject and patients



ASTOGRAPH TEST REPORT

TEST DATE	98/01/19	TEST TIME	
ID NO.	00001	WEATHER	TEMPERATURE °C
NAME		HUMIDITY	AIR PRESSURE hPa
SEX	M	IN/OUT PATIENT	IN
AGE	40	DEPARTMENT	Internal Medicine
HEIGHT	165.0 cm	PHYSICIAN	
WEIGHT	58.0 kg	TEST PHYSICIAN	

Rrs cont	2.0cmH ₂ O/L/sec	PROTOCOL	Adult Standard
Grs cont	0.510L/sec/cmH ₂ O	OSCI. FREQ.	3Hz
Dmin	2.839 Unit	OSCI.PRESS.	2.0cmH ₂ O
Cmin	1563 μg/mL	BC	Methacholine
SGrS	0.114L/sec/cmH ₂ O/min	BC MAX. CONC	2500 μg/mL
SGrS/Grs cont	0.224	BD	Alotec



Running Average in 10sec

NB No.	1	2	3	4	5	6	7	8	9	10	BD
Concn.(μg/mL)	49	98	195	391	781	1563	3125	6250	12500	25000	
Inhal.Time(sec)	60	60	60	60	60	60	60	60	60	60	120

BD Point	NB No.	Time
	9	60 sec

Specifications are subject to change without notice.

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