

Specifications

Spirometry

Measurements (forced): VC, FEV₇₅, FEV₁, FEV₃, FEV₆, FVC, PEF, FEV₇₅/VC, FEV₇₅/FVC, FEV₁/VC, FEV₁/FVC (FER), FEV₃/VC, FEV₃/FVC, FEV₇₅/FEV₆, FEV₁/FEV₆, FEF₂₅ (MEF₇₅), FEF₅₀ (MEF₅₀), FEF₇₅ (MEF₂₅), FEF₂₅₋₇₅ (MMEF), FEF₅₀/VC, FEF₅₀/FVC, MMEF/FVC (FEF₂₅₋₇₅/FVC), FIV₁, FIVC, PIF, FIV₁/FIVC (FIR), FIF₂₅ (MIF₇₅), FIF₅₀ (MIF₅₀), FIF₇₅ (MIF₂₅), R50 (FEF₅₀/FIF₅₀), MET₂₅₋₇₅, FET, MVV (ind)

Measurements (relaxed): EVC, IVC, IC, VT (TV), .Ti, Te, Ti/Ttot, VT/Ti (TV/Ti), IRV, ERV, FR

Tests per Subject: 5 relaxed VC manoeuvres and 8 forced manoeuvres for each baseline and two post examinations

Predicted Values: Various - depends upon national preference (including NIHANESIII)

Transducer: Micro Medical Gold Standard Bi-Directional Digital Volume

Volume Range: 0.1 to 9.99 Litres

Flow Range: 0.2 to 15.00 Litres/Second

Resolution: 10ml volume 0.025l/s flow

Accuracy: +/- 3% to ATS Standardisation of Lung function testing 2005

General

Storage : 2000 patients with tests including Flow/Volume loops and Volume/Time graphs

Printer Output: (External Printers) For the latest listing of compatible Hewlett Packard printers visit the Micro Medical website at www.micromedical.co.uk

Printer Output: (Internal Printer) 13mm/s (avg)

Power Supply: Input: 100-240V AC 50-60Hz Output: 12V 2.5A

Battery Pack: Rechargeable NiMH 8.4V 1Ah

Dimensions: 25.5cm x 12cm x 3.5cm Transducer 50 x 60 x 90mm

Weight: Excluding any transducers : 630g

Temperature: The instrument will operate in a uniform environment of 0°C - 40°C, out of direct sunlight

Operating Humidity: 30-90% non-condensing.

Storage Temperature: -20°C to +70°C

Storage Humidity: 10% to 90% RH

Connectivity: RS232 serial and USB 1.1

The MicroLab (Cat. No. ML3500) is part of an extensive range of respiratory monitoring equipment manufactured by Micro Medical Ltd.

Micro Medical Ltd pursues a policy of continuing improvement in design, production and performance of its products. The right is therefore reserved to vary details at any time and without notice.

Bibliography

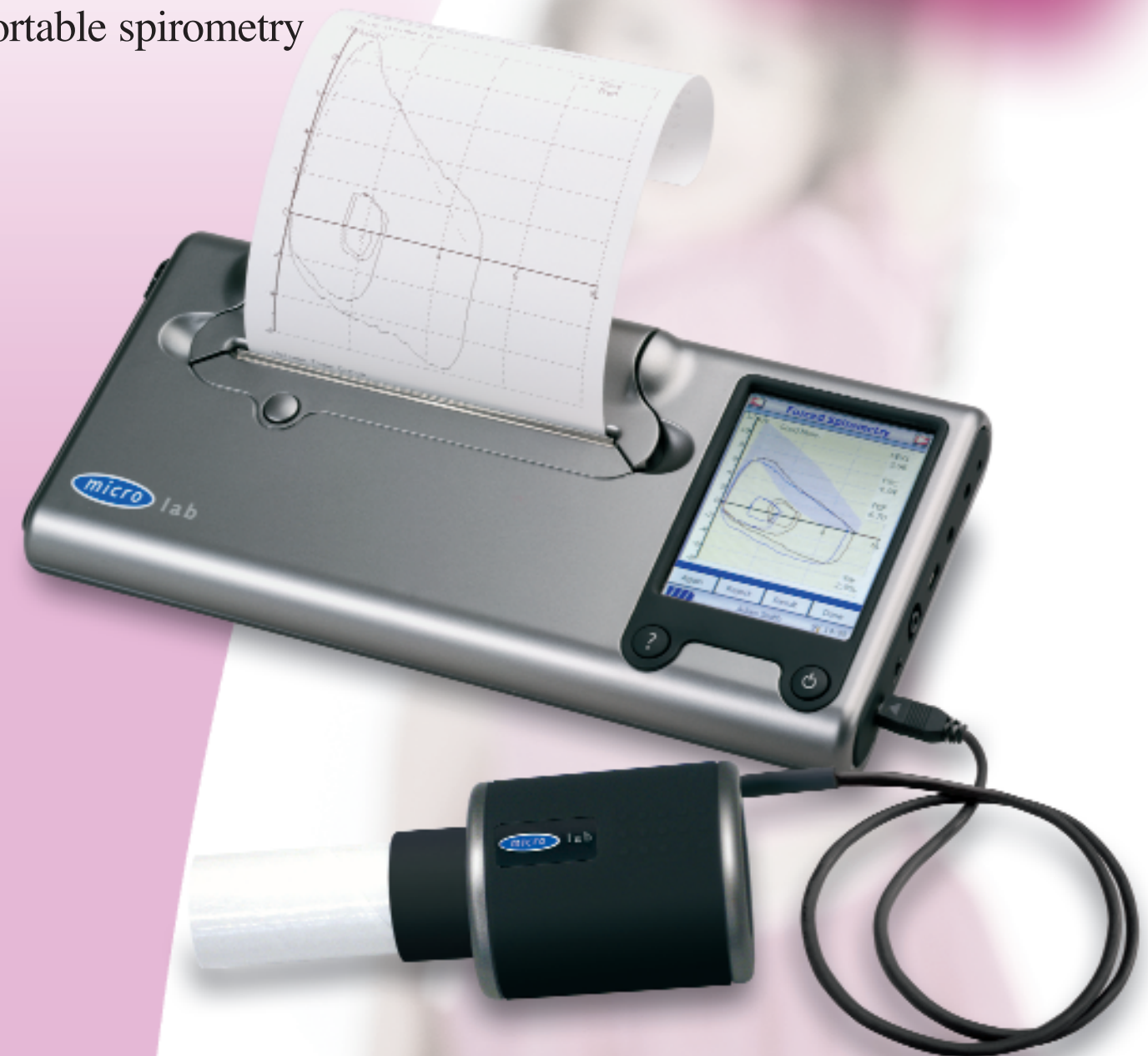
- 1 Dirksen A, Madsen F, Pedersen OF, Vedel AM, Jenson AK. Long term performance of a hand held Spirometer. Thorax 1996;51:973-976.
- 2 Otulana BA, Higenbottam T, Ferrari L. The use of home Spirometry in detecting acute lung rejection and infection following heart-lung transplantation. Chest 1990;97:953-7.
- 3 Pollard AJ, Mason NP, Barry PW, Pollard RC, Collier DJ, Fraser RS, Miller MR, Milledge JS. Effect of altitude on spirometric parameters and the performance of peak flow meters. Thorax 1996;51:175-178.
- 4 Godschalk, L, Brackel HJL, Peters JCK, Bogaard JM. Assessment of accuracy and applicability of a portable electronic diary card Spirometer for Asthma treatment. Respiratory Medicine, 1996;90:619-622.
- 5 Morris JF, Temple W. Spirometric 'Lung Age' estimation for motivating smoking cessation. Preventative Medicine, 1995;14 655-662.
- 6 BTS Guidelines for the management of Chronic Obstructive Pulmonary Disease (The COPD Guidelines Group of the Standards of Care Committee of the BTS) Thorax 1997;53 (Suppl 5):S4-6.
- 7 Wilson CM, Bakewell SE, Mr Miller etal. Increased resting bronchial tone in normal subjects acclimatised to altitude. Thorax 2002, 57: 400-404.
- 8 Bent Klug and Hans Bisgaard. Measurement of Lung Function in Awake 2-4 Year-Old Asthmatic Children During Methacholine Challenge and Acute Asthma. Paediatric Pulmonology 21:290-300 (1996).
- 9 American Thoracic Society. Standardization of spirometry: 1994 update. Am J Respir Crit Care Med 1995; 152: 1107-1136.
- 10 National clinical guideline on management of chronic obstructive pulmonary disease in primary and secondary care (National Institute of Clinical Excellence (NICE) /British Thoracic Society (BTS) Thorax 2004;59(Suppl 1): 1-232 doi: 10.1136/thx.2004.022707
- 11 Office spirometry, a practical guide of the selection and use off spirometers. Paul Enright
- 12 ATS/ERS Task Force "Standardisation of Lung Function Testing", Standardisation of Spirometry, European Respiratory Journal 2005; 26: 319-338.

Medical

a subsidiary of
VIASYS Healthcare

The future of
portable spirometry

NEW



Micro Medical Limited

PO BOX 6, Rochester, Kent, ME1 2AZ, UK

Telephone 01634 893500

Fax 01634 893600

International +44 1634 893500

Email micromedical@viasyshc.com

www.micromedical.co.uk



SURGICAL HOUSE

166 RAILWAY PARADE, LEEDERVILLE WA 6007

PO BOX 84, LEEDERVILLE WA 6902

surgical@surgicalhouse.com.au

TEL. +61 8 9381 4199

FAX. +61 8 9382 3009

www.surgicalhouse.com.au



Focus on the Future

Ease of use is key!

Highly portable and beautifully designed, the new generation MicroLab has been developed for the professional. Employing Micro Medical's acclaimed precision GOLD STANDARD Digital Volume Transducer (especially suited to measuring very low flow rates in patients with COPD) the instrument has a wide angle, high-resolution colour touch-screen. All the unit's features can be easily accessed by simply touching the chosen function's corresponding icon. This, together with fast textual data entry using a stylus or the optional MicroMouse makes the system's use highly intuitive.

A quiet and very fast printer with easy-load paper mechanism is integrated. The printout can be fully customised and can also be linked directly to external printers.*

Equipped with many advanced functions the MicroLab is fully compatible with Spida 5 and - the worlds' most comprehensive Spirometry PC software packages and - meets all International standards for performance and accuracy.

There are over 40,000 Micro Medical MicroLab Spirometers in use around the world; this new generation model is truly the most advanced portable Spirometer.

MicroLab Cat. No. ML3500

Features

- Fully compliant to ATS/ERS 2005 standard¹²
- High definition colour touch-screen
- Simple screen icon driven interface using stylus or optional MicroMouse
- Fast, quiet printer with easy load paper mechanism
- Fully customisable printout format
- Direct connection to external Hewlett Packard printers*
- Unique contextual Help Screens (language selectable) with dedicated Help Button
- 41 inspiratory and expiratory indices measurable
- On-screen graphical child incentive device
- Large 2000 patient test memory
- Optional Spida 5 or SpidaXpert PC software

* Compatible models specified by Micro Medical

- Internationally recognised on-screen test quality assurance prompts (e.g. slow start, abrupt end etc.) ensuring quality test results
- Unique 'today's testing feature' - creating a list of patients tested or to be tested
- Numerous predicted values and languages selectable
- 'Lung Age' assessment and textual result interpretation by ATS⁹, BTS-NICE¹⁰ or Enright¹¹
- Body Mass Index and Dyspnoea Score
- Bronchodilator and/or Steroid assessment
- Complete with all accessories in a sturdy carrying case



Easy Load high resolution printer

High definition touch-sensitive screen

Battery charge status light

Power connection input

Serial port

USB Port (Mini AB)

MicroMouse port (option)

Flow head / transducer ports

Help button

On/Off Button

GOLD STANDARD



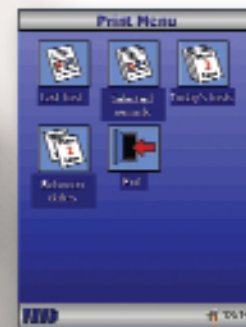
Digital Volume Transducer Spirometers are NOT ALL THE SAME.

Setting new standards in spirometry

The Gold Standard transducer from Micro Medical gives the most precise volume and flow measurements for Asthma and COPD patients. Especially effective at low flows, it complies with all current ATS¹² and other recognised international standards for accuracy. This means that Micro Medical's world beating spirometers are the definitive benchmark for accurate respiratory measurement bar none



Touch icon main menu



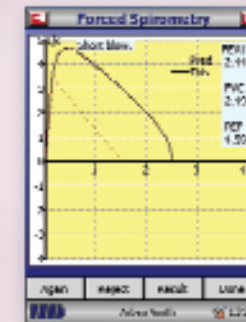
Comprehensive printing menu



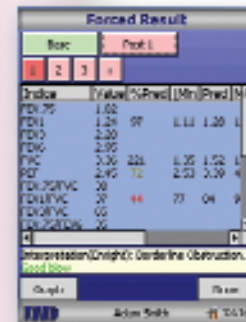
Touch screen keyboard



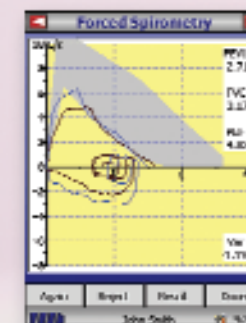
Simple system customisation



Open loop spirometry



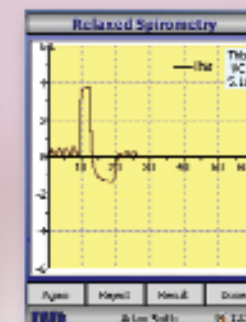
Comprehensive results screen



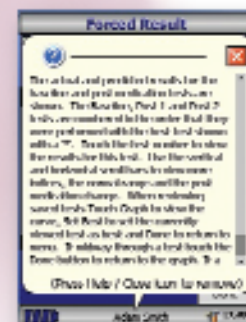
Closed loop spirometry



Child Incentive device



Relaxed tidal breathing



Screen specific help