

EXPAIR Software

Version specific to the FE_{NO} module

- SQL database with processing tools and backup function
- Historical function
- Interpretation function
- Comments function
- Reports configuration
- Choice of language
- Pharmacodynamic tests
- Choice of measuring units
- Inbuilt quality control of calibrations
- Phone desk Technical support
- Technical toolbox enabling diagnostic function and full program control

Version integrated to available PFT equipment

The MediSoft factory is a state of the art modern facility with clinical research, precision engineering and computer design departments.

HYPAIR Fe_{NO}

GENERAL SPECIFICATIONS

Dimensions (HxWxD) cm : 14 x 21 x 33
Weight : ± 10 kg
Power requirements : 230/115 VAC 50/60Hz
Power consumption : < 20 VA
Warm up time : < 30 minutes
 Conform to electric safety requirements
 Certified CE 044

NO ANALYSER

Cell type : Electrochemical
Cell life span : min. 2 years
Measurement range : 1 to 200 PPB (Bronchial)
 1 to 2000 PPB (Nasal)
Response time : 25 seconds
Analysis time : 35 seconds
Stability : drift < 1% / day
Relative accuracy : Better than 1PPB
Linearity : error < 0,5%
Reproducibility : ± 2 PPB
 Automatic compensation of drifts due to temperature variations

AMBIENT CONDITIONS

Ambient temperature : 15° to 35° C
Ambient humidity : 10 to 80 % not condensed
 Integrated Sensors for automatic correction- Bar.P, Temperature, Humidity

LIMIT OF AMBIENT POLLUTION NO

No limit

CAPTIVE CONSUMMABLES

Absorption column of ambient NO : lifespan > 6 months

COMPUTER INTERFACE

Type : USB with galvanic isolation
Operating system : Windows XP

MEASUREMENT OF EXPIRED FLOW RATE

Pneumotocograph Lilly cone
 Differential pressure sensor type Piezo resistive
 Flow rate range : 0,01 to 1 L/sec
 Expired flow rate standardised between 300 to 400 L/sec

MEASUREMENT OF EXPIRED PRESSURE

Pressure sensor type piezo resistive protected against overpressures
 Measuring range ± 50 cm H₂O
 Expired pressure range standardised between **10 and 20 cm H₂O**

CALIBRATION

Analyser
 Automatic procedure - frequency (min 2 x day)
 Standard gas cylinder at ± 100 PPB
 Consumption : ± 0,25 L
Pneumotocograph - flow meter
 Automatic procedure with a 1 litre calibration syringe - frequency (min 1 x year)
Pressure transducer (mouth pressure)
 Automatic procedure with water column - frequency (min 1 x year)

EXTERNAL PATIENT CIRCUIT

Ringed pipe - length 60 cm Ø 10 mm
 Adaptor for MS disposable antibacterial filter
 Dead space ± 20ml

CLEANING DISINFECTION

Use of an antibacterial filter protects the whole of the patient circuit.

BIBLIOGRAPHY REFERENCES

Am J Respir Crit Care Med
 Vol 171 pp 912-930, 2005
 DOI: 10.1164/rccm.200406-710ST

Improving care for asthma patients

HYPAIR Fe_{NO}

ENDOGENOUS EXHALED NO MEASURING SYSTEM



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HYPAIR Fe_{NO}

Endogenous exhaled NO measuring system, using the off-line method

Technique :

- Standardised (ERS/ATS guidelines)
- Simple, fast and non-invasive
- Low cost
- Reproducible results (maximum variation 5PPB)

Fe_{NO} measurements

- Are the best marker
 - Of the level of inflammation of the airways
 - Of the response to steroids
- Improve patient care
- A direct relationship clearly exists between the dose of steroid inhaled and the decrease of the FeNO value measured allowing the steroid dose to be adapted to the patient's needs.

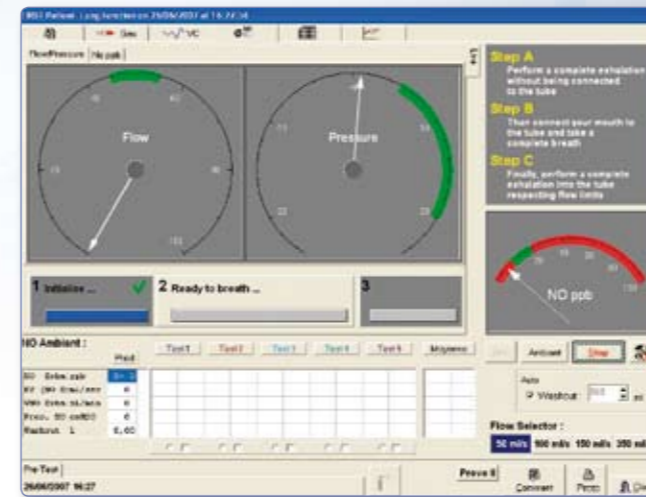
Competitive advantages

- Low operating costs
- Easy control of the expiratory flow rate and pressure
- Fully integrated into our PFT equipment range
- Automatic procedure of the quality control of the analyser
- Measurement Interpretation screen



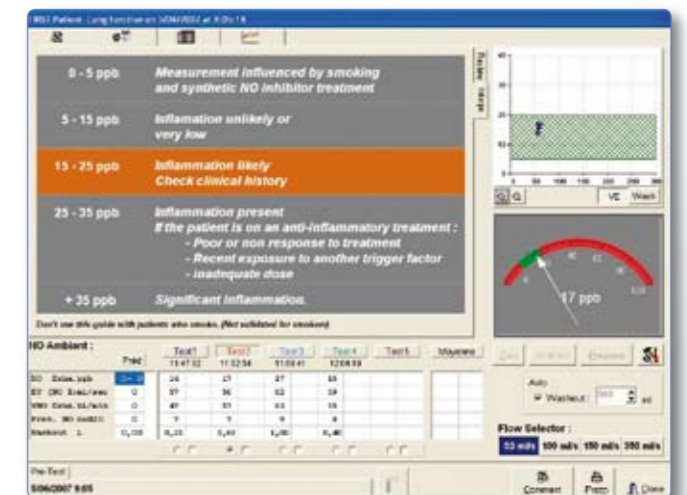
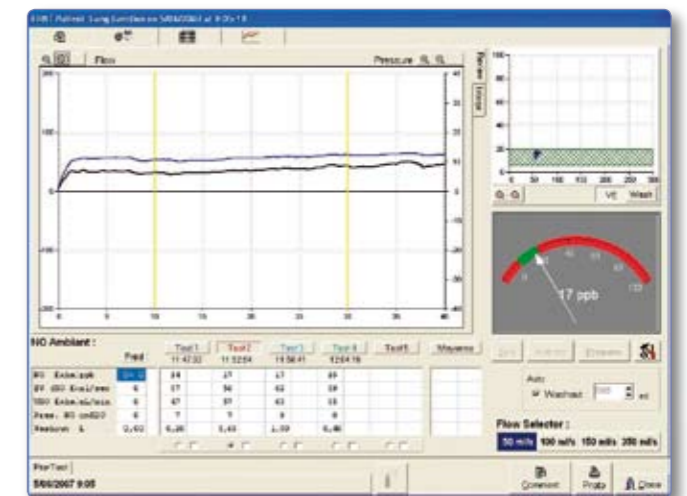
Chemical column for the absorption of ambient NO (pollution)

Measurement sequence



- INITIALISATION**
The patient breathes out.
- INSPIRATION**
Maximum inspiration of air with ambient NO removed, through the equipment.
- EXPIRATION**
Full expiration through a respiratory break.
- ANALYSIS TIME < 60 SECONDS**
Display of results.

Display of the results



Measured parameters

NO

Maximum value of exhaled NO in ppb

VE

Averaged expired flow rate in litres/min

∇NO

Averaged expired NO flow rate in mL/min

Pres.

Averaged expiratory pressure in cm H₂O

- Number of tests : maximum 5 per screen
- Results averaging of tests performed

CE 0344



ISO 13485 : 2000