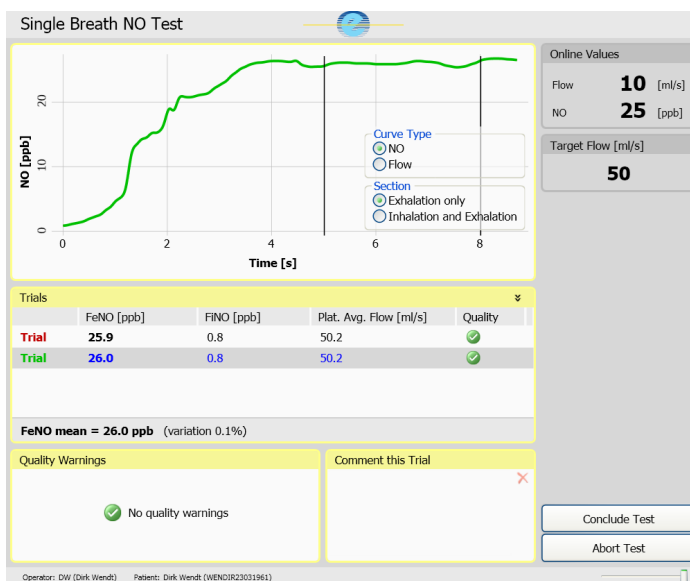


# SPIROWARE® 3.0

FeNO-Analysis compliant to ATS / ERS-Standard



## Your advantage:

**A single FeNO-system for infants, children and adults**

**Single as well as multiple breath testing**

**Real time and offline-measurements with automatic plateau detection**

**Nasal FeNO analysis**

**Integrated trend reporting**

**Workplace and server version available**

**State of the art SQL-Database**



The detection of exhaled Nitric Oxide (FeNO) by CLD technology is an easy, precise and direct method to detect eosinophilic airway inflammation. The new SPIROWARE® 3.0 is a flexible software tool for easy performing, analyzing and reporting of various FeNO tests. This powerful package is the graphical interface between measurement and excellent documentation of the evaluated data. The future oriented concept fulfils highest requirements of functionality and easy operation.



## Exhaled Nitric Oxide (FeNO-Test)

The unique combination of nitric oxide measurement and ultrasonic flow measurement opens up new horizons in the pulmonary function testing. The leading edge measurement enables early detection of airway inflammation as well as therapy control after drug delivery. The application ranges from neonates to adults, single and multiple breath testing. The instrument may be used for any measurement where NO can be detected in gases.

## User guidance

Easy and efficient operation is guaranteed by the integrated user guidance. The operator benefits from the intuitive work flow from patient selection to various FeNO tests and reporting. Comments may be added to each trial and displayed in the final test report.

The state of the art SQL database can be used to search for existing patients or performed tests.

## Trend reporting

The integrated trend chart gives information about the patients FeNO history and guides future decisions - a useful tool to improve the inflammatory status.

## User specific reporting

The delivered report templates may be easily modified or custom specific reports created, by a standard word processor. Measured data as well as calibration status or history may be printed out. Results are presented in numerical as well as graphical form.

## HIS interface

The optional HL 7 - interface enable the communication from hospital information system (HIS) and the analyzer CLD 88sp with SPIROWARE® 3.0.

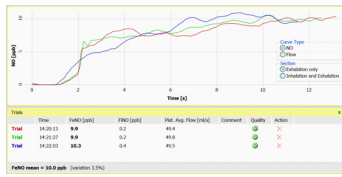
In private practice offices the optional GDT - interface is mainly used. Patient information and the FeNO test results may be transferred to a host computer for centralized data collection and storage.

## ATS- / ERS-reference

The analyzer CLD 88sp with SPIROWARE® 3.0 is CE MDD (0483) approved for clinical use. The chemiluminescence detection method is only ATS / ERS approved measurement principle for exhaled Nitric Oxide analysis (FeNO test - Gold Standard) to fulfill the requirements for detection limit, response time and measurement range.

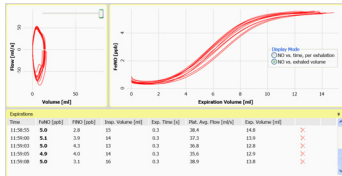
# Specifications SPIROWARE® 3.0

## Single Breath Test



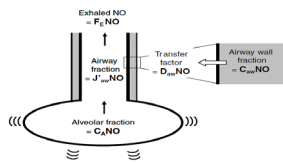
**Application:** Cooperative children and adults  
**Range selection:** Automatic  
**Insp. volume:** Body weight guided  
**Plateau detection:** Automatic or user selectable  
**Flow control:** 50 ml/s (ATS / ERS Standard)  
**Resolution FeNO:** 0.1 ppb

## Multiple Breath Test



**Application:** Spontaneous breathing patients  
**Method:** Vt related multiple breath detection  
**Plateau detection:** Automatic or user selectable  
**Resolution FeNO:** 0.1 ppb  
**Resolution Vt:** 10 ml (infants and adults, adjustable)  
**Sample flow:** 110 or 330 ml/min (selectable)

## Alveolar FeNO Calculations



**Method:** Single breath test type  
**Flow control:** 30, 100, 300 ml/s (recommended)  
**Parameters:** CaNO, CawNO, JawNO, DawNO  
**Resolution CaNO:** 0.1 ppb  
**Validity check:** Integrated, automatic  
**Algorithm:** M. Högman and P. Meriläinen, 2007

## Nasal FeNO



**Application:** Cooperative children and adults  
**Range selection:** Automatic  
**Plateau detection:** Automatic or user selectable  
**Sample flow:** 330 ml/min  
**Resolution FeNO:** 0.1 ppb  
**Max. FeNO:** 5000 ppb

## Offline FeNO



**Application:** Offline from Mylar sample bag  
**Plateau detection:** Automatic or user selectable  
**Resolution FeNO:** 0.1 ppb  
**Max. FeNO:** 5000 ppb  
**Sample flow:** 110 or 330 ml/min (selectable)

## Database and Reporting



**Database:** Microsoft SQL 2008 Compact or Express  
**Application:** Single computer or server-installation  
**Reporting:** Standard or custom specific reports  
 Rich Text Format (RTF)

**HIS – Integration:** HL 7 and GDT (optional)

## System Requirements

Pentium 3 Processor or better, Microsoft Windows XP with SP2 or VISTA, .NET Framework 3.5 with SP1, RS232 Interface, 16MByte RAM, 10MB free space on hard disk, XGA-Graphics or better, USB 1.0 or higher

Ref.: ATS/ERS Recommendations for Standardized Procedures for the Online and Offline Measurement of Exhaled Lower Respiratory Nitric Oxide and Nasal Nitric Oxide, 2005

ECO MEDICS reserves the right to change these specifications without notice. Manufactured by ECO PHYSICS AG - Switzerland

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