

tremoflo® C-100 Benefits

-  Tidal Breathing
No forced expiration.
-  Intra-Breath Analysis
Pattern & Time-Course.
-  Respiratory Mechanics
Info related to small airways. ²
-  Easy Daily Calibration
Less than 30sec.
-  Fast & Easy
Test in a few minutes.
-  Compact & Portable
Weighs only 700g.
-  Adult & Pediatric
Normative values provided.
-  Pre/Post Testing
Automated workflows.



AIRWAVE
OSCILLOMETRY
SYSTEM (AOS)

MEASUREMENT PRINCIPLE:	OSCILLOMETRY (FORCED OSCILLATION TECHNIQUE, FOT)
OSCILLATOR TECHNOLOGY:	BREATHE-THROUGH VIBRATING MESH (PATENTED)
MEASUREMENT MODES:	AOS: PSEUDO-RANDOM NOISE
MEASUREMENT DURATION:	20 SEC (MIN.), USER ADJUSTABLE 3 REPETITIONS (AS PER GUIDELINE)
PATIENT INTERFACE:	BACTERIAL/VIRAL FILTER WITH INTEGRATED MOUTHPIECE
DIMENSIONS & WEIGHT:	19 X 13 X 14 CM, 0.7 KG (HANDHELD ONLY) 21 X 14 X 24 CM, 1.7 KG (HANDHELD & CRADLE)
PERFORMANCE:	MEETS AND EXCEEDS ERJ 2003, 22: 1026-1041

MORE INFORMATION:
WWW.THORASYS.COM

- 1 Al-Alwan et al., AJRCCM 2014
- 2 Usmani et al., RESPIRATORY MEDICINE 2016
- 3 Hirsh et al., AAAAI 2011
- 4 Galant et al., AAAAI 2017
- 5 Johnson et al., THORAX 2007
- 6 McNulty and Usmani, ECRJ 2014
- 7 Navanandan et al 2020
- 8 Cottee et al., 2021 APSR
- 9 Cho et al., 2020 Am J Respir Crit Care Med

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THORASYS®

Beyond Spirometry:

Try
Oscillometry
Now!

FAST, EASY
& PORTABLE

tremoflo®
Airwave Oscillometry



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The Importance of Small Airways

Airwave Oscillometry provides information related to small airway function.

"The small airways are frequently involved early in the course of [asthma and COPD] diseases, with significant pathology demonstrable often before the onset of symptoms or changes in Spirometry and imaging."⁶

"Peripheral airway impairment may be clinically relevant at all levels of asthma severity and control."⁴

Airwave Oscillometry Fundamentals

tremflo[®] measurements are fast and easy. The patient just breathes quietly.

To assess respiratory function, the tremflo[®] adds a gentle oscillatory wave to the patient's regular, quiet breathing.

A short measurement duration of only 20 to 30 seconds allows three repetitions within a couple of minutes, even in patients who have difficulty performing spirometry.

Outcomes

Summary of clinician interpretations per published studies¹⁻⁵

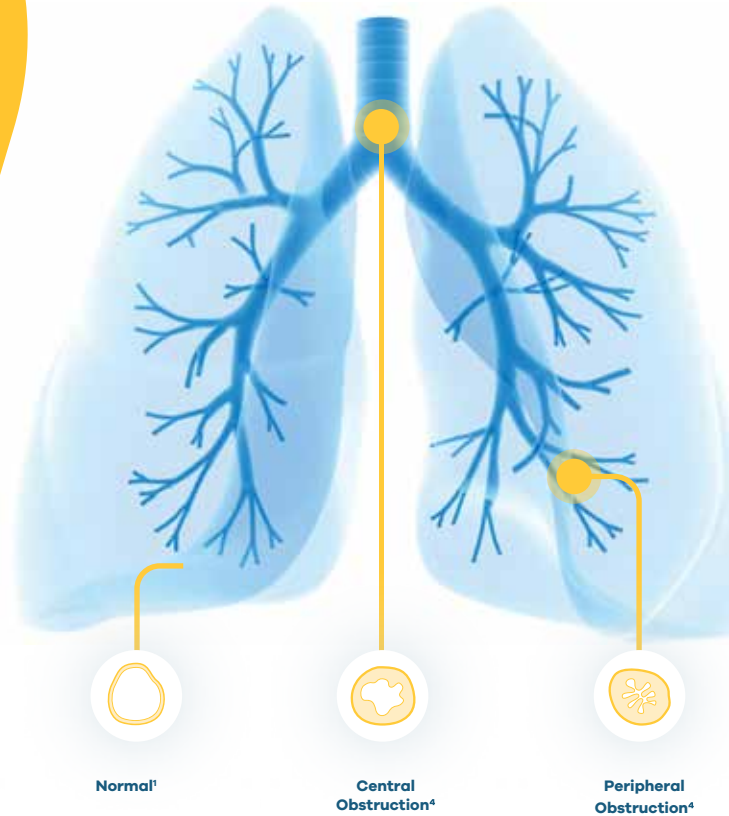
Characteristic Patterns

A pair of two curves calculated from the raw data reflects the mechanical properties of the respiratory system in characteristic patterns.

Key Outcomes

Several key outcome parameters are then derived from the Resistance and Reactance curves.

Airwave Oscillometry Fundamentals

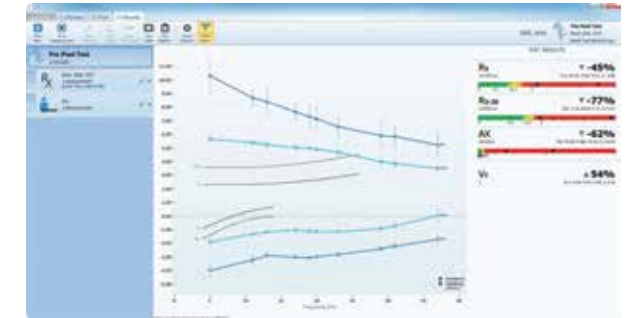


Parameter	Normal	Central Obstruction ⁴	Peripheral Obstruction ⁴
Resistance at 5 Hz ¹	R_5 Normal	↑	↑
Resistance change, 5 to 20 Hz ¹	R_{5-20} Close to zero	Close to zero	↑
Reactance area ¹	AX Normal	Normal	↑

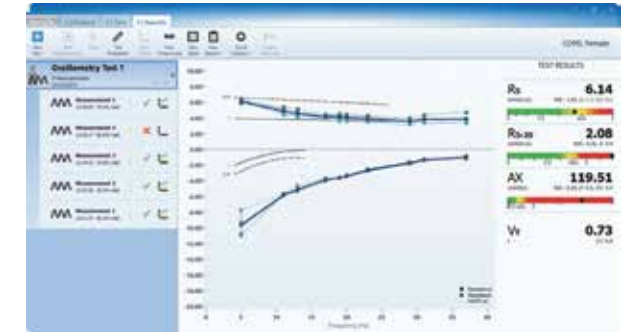
Actual Data

A simple green-to-red gauge scale clearly shows whether patients fall within or outside normative values that are available for pediatrics and adults.

Pre / Post Test in Asthma Patient



Test in COPD Patient



Expert Opinions

"Oscillometry is feasible, responsive, and safe in children with acute asthma exacerbations in the Emergency Department."⁷

"FOT is useful either when added to Spirometry providing complementary mechanical information or when Spirometry cannot be measured, such as during the current COVID-19 pandemic."⁸

"In a survey conducted at 3 months after lung transplant [...] patients reported a significantly higher satisfaction with Oscillometry compared with Spirometry and found Oscillometry to be significantly easier to perform than Spirometry."⁹