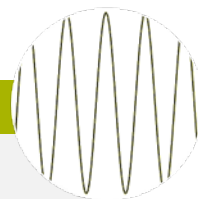


Comparing 5Hz Single-Frequency vs. Multifrequency Oscillometry: which one is the best choice?

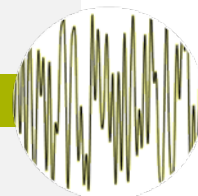
5 Hz Single-Frequency Oscillometry

- **Available parameters:** R5, X5, ΔX_{rs}
- **Better signals:** single frequency oscillation provides the best signal-to-noise ratio, allowing a more accurate measurement of a broader range of obstructions.
- **Data Simplicity:** Provides a clear picture with less complex data, ideal for quick clinical decisions.
- **Peripheral and Central Airways:** Low frequency oscillations, such as the 5 Hz frequency, stimulate the entire respiratory system, offering valuable insights into peripheral airways and making it an excellent all-around choice.¹
- **Simplified equipment:** Requires less sophisticated equipment, making it more accessible and cost-effective.
- **Best for:** Lung function testing in severely obstructed patients and routine clinical and primary care setting monitoring.



Multifrequency Oscillometry

- **Available parameters:** R, X at all the stimulating frequencies, ΔX_{rs} , AX, R5-19
- **Detailed Analysis:** Assesses lung function at multiple frequencies, providing a comprehensive evaluation of heterogeneous obstructions.
- **In-depth evaluation:** Multifrequency data requires more sophisticated analysis, making it suitable for in-depth research or complex cases.
- **Complex equipment:** Requires more advanced devices, increasing costs and complexity.
- **Best for:** Advanced diagnostic contexts and research settings when detailed respiratory system assessment is needed.



KEY TAKEAWAYS

- ✓ **Use 5Hz Single-Frequency oscillometry for routine clinical assessments, where simplicity and speed are essential or in case of severely obstructed patients.**
- ✓ **Opt for Multifrequency Oscillometry in cases where detailed insights into lung mechanics is critical.**

REFERENCES:

1. Veneroni C, Valach C, Wouters EFM, et al. Diagnostic Potential of Oscillometry: A Population-based Approach. *Am J Respir Crit Care Med*. 2024;209(4):444-453.

Encourage adoption for better respiratory diagnosis

MAKE OSCILLOMETRY ROUTINE