



*Case #501*

## **Disposable Impedance Adapter (DIA) for Ventilator Assessment of Respiratory Function**

Assessment of respiratory mechanical function in patients on mechanical ventilators is done using a measurement of impedance on ventilator pressure and flow, but when a patient is partially breathing for themselves, accurate respiratory function measurements cannot be determined using these parameters. The DIA solves this problem by providing a controlled oscillatory perturbation of the airflow delivered to the patient so that the impedance measurement can be done at a frequency range above that of the regular ventilation waveform using pressure transducers that are embedded within the DIA. The DIA is integrated into a patient's ventilator between the endotracheal tube and the tubing of the ventilator and is disposable to minimize infection risk.

### **Applications:**

- Ventilators in critical care, neonatal and ambulatory care settings.

### **Advantages:**

- Provides accurate measurement of impedance, even in patients with active respiratory muscles.
- Disposable to minimize infection risk.
- Easily integrated into a patient's ventilator

### **Intellectual Property and Development Status:**

US Non-Provisional Application US20160007882A1

Looking for research collaboration and licensing opportunities.

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