



*Case #479*

## **Cardiopulmonary Function Monitor**

Cardiac output is the most important indicator of cardiac function and is currently measured with invasive heart catheterization or by using time-consuming and expensive methodologies such as echocardiography or magnetic resonance imaging.

Dr. Meyer and his colleagues have conceived a new method to measure circulation time without using injected agents or the need for blood samples. This method is accomplished by making brief changes in an individual's blood oxygen saturation by taking a breath of nitrogen, the most prevalent gas in ambient air. The time it takes to change the oxygen saturation at a peripheral site is then measured using pulse oximetry. This time measurement directly correlates to cardiac output.

### **Applications:**

- Medical outpatient and inpatient vital signs
- Combat & emergency medical care.
- Add on for cardiovascular & pulmonary equipment manufacturers.

### **Advantages:**

- Non-invasive methodology.
- Gives immediate results.
- Easy to use.
- Low cost.
- Assesses pulmonary gas exchange.

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

US Patent 9,439,577

Prototype hardware and software ready for safety studies

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