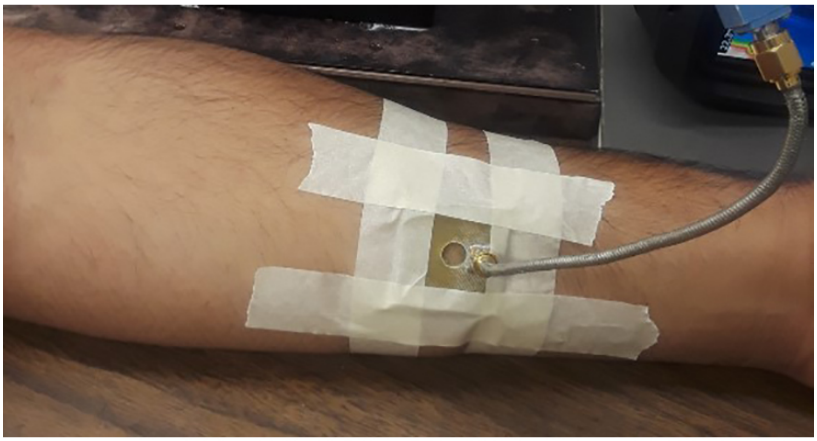
Non-Invasive Skin Perfusion Measurement

ID# 2018-4831



Novel method conducted on human arm.

Technology Summary

Deep tissue and skin perfusion is a critical factor in the management of many medical conditions and procedures. Researchers have developed a novel device and method for quantitatively assessing blood perfusion. This device would have applications in plastic surgery and other types of procedures involving thick skin flaps. The tissue is first heated with microwave heating (MWH). Once the tissue is heated, it is then measured with infrared radiometry (IRR) to detect the blood perfusion non-invasively.

Application & Market Utility

Conventional perfusion measurement techniques tend to have limited clinical use due to a lack of reliable and cost-effective devices capable of measuring the absolute blood perfusion rate. Compared to competing technologies, this technology is less invasive, more quantitative, and less costly. It can also be used both intra-operatively and post-operatively to assess blood perfusion, so that corrective procedures can be performed before the patient is discharged.

Next Steps

Patent pending. Seeking licensing opportunities.

TECHNOLOGY READINESS LEVEL	4-7

Seeking

Licensing |

Keywords

- microwave heating
- thermography
- blood perfusion
- infrared radiometry
- plastic surgery

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