

Rubitection

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Technology description

What is Rubitection?

Rubitection makes portable hand held devices for diagnosing early stage (Stage 1) pressure ulcers and deep tissue injury under intact skin (addition to monitoring the healing of pressure ulcers) across all variations in skin pigmentation. The device when placed in contact with the skin, will emit light and collect the light reflected off the skin to measure relative concentration of melanin, oxy Hemoglobin, deoxy Hemoglobin, tissue oxygen saturation, skin turgor/elasticity and skin temperature.

What does the device include?

The device includes the hardware, software, and analysis components needed to measure the static blood/hemoglobin concentration during periods of non compression and compression, the transient periods of blood out flow (during compression) or blood refill (after compression), and the color/hue of the lesion.

The device also includes a method for measuring other properties of the skin/tissue (skin temperature and skin turgor/elasticity) and for determining the depth of tissue damaged related to early stage pressure ulcer development. It will also include a template for arriving upon a diagnosis based on the measured parameters of the skin and a disposable cover which will serve to block the ambient light in the room and to maintain the sterility of the device.

Application area

In addition the device will include the software, hardware, and analysis components needed to monitor the pressure application of the user to provide feedback about the applied/required pressure.

Institution

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