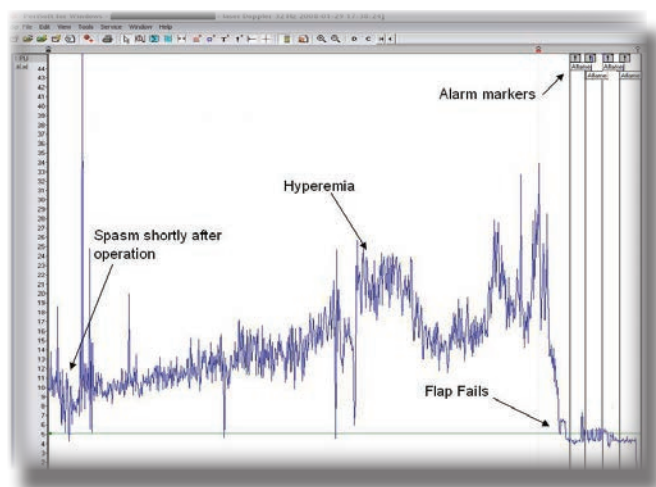


Flap/Organ Monitoring

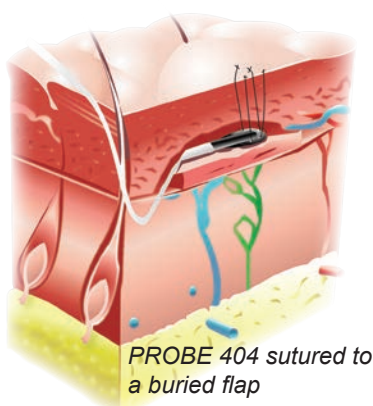
Early signs of impaired circulation can be detected by monitoring the blood perfusion in replants and flaps using the laser Doppler technique. This information can help to prevent loss of the replant.

The **PeriFlux System 5000** equipped with dedicated probes can monitor blood perfusion in buried, oral and superficial flaps in a simple and straightforward manner. The system uses laser Doppler technology which will also reflect pulsatility and vasomotion. Lack of pulsatility and vasomotion are signs of a failing flap.

The choice of laser Doppler probe for monitoring the blood perfusion depends on the characteristics of the flap. Below are three commonly used probes:



Blood perfusion in a free flap monitored for 16 hours after surgery



PROBE 404 sutured to a buried flap

PROBE 404 Suturable Angled Probe

PROBE 404 is the best choice for monitoring buried flaps or flaps inside the oral cavity. Its flat shape without any protruding parts makes it easy to remove. The probe is sutured to the flap using holes at the rim of the probe head.



PROBE 407 and probe holder

PROBE 407 Small Straight Probe

PROBE 407 offers a simple and straightforward solution for monitoring superficial flaps. The probe is small and flexible in its design, making it easy to fix to the skin using double-sided adhesive tape and a probe holder. Probe holders with pre-drilled holes are available if suturing is necessary.



Bone probe with bone-probe holder attached

PROBE 426 Bone Probe

PROBE 426 is intended for measurements in bone. The probe is fixed to the bone using a dedicated bone-probe holder that is screwed into a pre-drilled hole in the bone. The probe can be left in the bone-probe holder for monitoring purposes after surgery.

Examples of Use



Groin flap to arm,
PROBE 407 with
sutures probe holder



Fibula flap to
mandible, Bone
PROBE 426



Mouth floor
reconstruction with
PROBE 404



Monitoring kidney after
transplant with PROBE
404

PeriFlux System 5000

Laser Doppler Blood Perfusion Monitoring

The **PeriFlux System 5000** uses laser Doppler to monitor the blood perfusion at a single point. Monitoring at a single point allows for rapid data sampling and visualization of dynamic perfusion changes in real-time.

For data acquisition and analysis, the dedicated **PeriSoft for Windows** application software is used. It graphs the blood perfusion and allows the user to set alarms and baseline values to facilitate the flap monitoring process.

The **PeriFlux System 5000** is a modular system enabling the simultaneous monitoring of (laser Doppler) blood flow / perfusion and transcutaneous oxygen and / or carbon dioxide. Modules for heat provocation and pressure control are also available. This opens up a range of different approaches to study the microcirculation depending on the application of interest. In addition, the number of sites measured simultaneously is flexible and expandable.



Laser Doppler Technique

When a laser beam enters tissue it will become scattered and partly absorbed. If this scattered light hits moving blood cells, the light will change frequency due to the Doppler effect. The magnitude and frequency distribution of these changes are directly related to the number and velocity of the blood cells in the sample volume. These properties are analyzed and used to calculate the blood perfusion.

Due to Perimed's commitment to continuous improvement of our products, all specifications are subject to change without notice.

For more information please contact Perimed AB

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