



Photoacoustic imagery







How it works



- Light is shone at the sample
- The illuminated sample warms and expands
- The expansion disrupts the water, which generates ultrasounds
- The ultrasound detector analyzes the signal

Benefits:

Shows blood (best light absorption) Higher penetration than other light-based methods





Session objectives



Physical concepts

- Spectrum of light
- Absorption wavelengths
- Thermal expansion

Practice with the instrument

- Demonstration of absorbance with nanoparticles
- Measure the diameter of a blood vessel
- Measure of pulse



Example: Blood in fingers



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Software controls





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