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Title:Effects of formalin fixing on the terahertz properties of biological tissues
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Abstract:We demonstrate how the terahertz properties of porcine adipose tissue and skeletal muscle are affected by formalin fixing. Terahertz radiation is sensitive to covalently cross-linked proteins and can be used to probe unique spectroscopic signatures. We study in detail the changes arising from different fixation times and see that formalin fixing reduces the refractive index and the absorption coefficient of the samples in the terahertz regime. These fundamental properties affect the time-domain terahertz response of the samples and determine the level of image contrast that can be achieved.
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