absorption and scattering contributions [18,19] which may help lead to determination of absorber concentration within tissues.

Recently, Bosschaart *et al*. used a similar system as the one presented here (including spectral detection range), named low-coherence spectroscopy (LCS) to assess absorption [10]. Using scattering polystyrene spheres and a green dye for absorption, it was found that LCS was a promising technique for *in-vivo* determination of tissue absorption properties regardless of scattering. This further supports the claim that the approach used here can be applied to tissue, despite the fact that the samples did not contain scatterers. Like the work presented in [10], the technique presented here offers higher sensitivity by operating in the visible wavelength region. However, the methods for detecting absorption differ: In this study, the DW method is used, which enables high spectral resolution along with the same spatially resolved imaging capabilities as OCT. In [10], the method requires translation of both the sample and reference arms, and must also sacrifice spatial resolution to achieve the spectral resolution required for quantification.

In summary, we have shown that our pfdOCT system using the DW method is capable of measuring hemoglobin concentrations as low as those found in healthy and cancerous tissue. This further supports the hypothesis that SOCT may improve upon current optical techniques that are used to assess tissue properties for disease diagnosis. Future works will aim to implement this technique to assess Hb concentration within tissue.

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