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Method for measuring optical parameters in weakly absorbing turbid media

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Keywords

scattering coefficient, optical diffusion, scattering in weakly absorption medium

Abstract

This article develops a simple, yet effective technique of measuring optical parameters in weakly absorbing turbid samples. Although based on diffusion theory, this technique largely relaxes its strict non-boundary and spot source requirements by choosing a suitable source-detector distance. Moreover, the technique is applicable not only to liquid samples, but also to solids or on-line measurements. Experimental results demonstrate that, measured by this method, the reduced scattering coefficients of intralipid suspensions are in good agreement with those obtained by other authors. The paper also reports on the application of this technique to scattering measurements in pulp.





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