Abstracts

Broad-Band Microwave Measurement of Water Using Transient Radiation

C.D. Capps, R.A. Falk, S.G. Ferrier and T.R. Majoch. "Broad-Band Microwave Measurement of Water Using Transient Radiation." 1992 Transactions on Microwave Theory and Techniques 40.1 (Jan. 1992 [T-MTT]): 96-101.

Previous workers have demonstrated the utility of optoelectronically pulsed antennas to make broad-band microwave measurements of the dielectric properties of relatively low loss materials. This work presents an extension of the analysis technique that allows measurements to be made on highly absorptive samples. Experimental results for water in the 10-70 GHz frequency range are presented, error sources analyzed, and results compared with measurements made with a different technique.

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