Abstracts

Radiation-Corrected Open-Ended Coax Line Technique for Dielectric Measurements of Liquids Up to 20 GHz

Y.-Z. Wei and S. Sridhar. "Radiation-Corrected Open-Ended Coax Line Technique for Dielectric Measurements of Liquids Up to 20 GHz." 1991 Transactions on Microwave Theory and Techniques 39.3 (Mar. 1991 [T-MTT]): 526-531.

An experimental technique and associated analysis are described for the measurement of the dielectric constants of liquids at microwave frequencies using an open-ended coax probe. The analysis includes radiative corrections to the probe-liquid interface impedance. The technique is applicable to liquid and liquidlike (e.g., biological) samples, having dielectric constants comparable to water, at frequencies up to 20 GHz and possibly as high as 40 GHz.

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