Abstracts

Microwave Measurement of the Dielectric Constant of High-Density Polyethylene (Short Papers)

K. Seeger. "Microwave Measurement of the Dielectric Constant of High-Density Polyethylene (Short Papers)." 1991 Transactions on Microwave Theory and Techniques 39.2 (Feb. 1991 [T-MTT]): 352-354.

By applying a new microwave technique which involves observing interference fringes in transmission, metallizing the sample faces adjacent to the waveguide, and thus using the sample as a dielectric-filled metallic waveguide, the real part of the dielectric function of high-density polyethylene has been determined as 2.34 at room temperature and 2.29 at liquid nitrogen temperature (77 K) for the frequency range from 26.5 to 40 GHz.

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