Abstracts

Biological Applications of a Technique for Broadband Complex Permittivity Measurements

Y. Wei and S. Sridhar. "Biological Applications of a Technique for Broadband Complex Permittivity Measurements." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1271-1274.

A broadband coax technique developed by us for the measurement of dielectric properties of biological substances up to at least 20 GHz, is discussed. For water-based materials such as blood or muscle substitute phantoms, a 0.047 inch size probe is essential to minimize errors due to radiation. The data indicate the importance of the dielectric volume of the constituents, and enable tailoring of phantoms and substitutes for use in biomedical applications.

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