Abstracts

Soft and Dry Phantom Modeling Material Using Silicone Rubber with Carbon Fiber

Y. Nikawa, M. Chino and K. Kikuchi. "Soft and Dry Phantom Modeling Material Using Silicone Rubber with Carbon Fiber." 1996 Transactions on Microwave Theory and Techniques 44.10 (Oct. 1996, Part II [T-MTT] (Special Issue on Medical Application and Biological Effects of RF/Microwaves)): 1949-1953.

New phantom models that can simulate the effect of electromagnetic waves on human tissues have been developed. These phantom models can be designed to fit a wide range of complex permittivities by using two types of carbon fiber within a silicone rubber base. Tissues with low water content, such as fat and bone, and tissues with high water content, such as skin and muscle, can both be modeled using the phantom models discussed in this paper. When using conventional phantom model materials, care must be taken to prevent decomposition and dehydration during storage. The materials used for these new phantom models do not dry out and can be used repeatedly with reliable results.

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