Abstracts

Dynamic 'In Vivo' Performance of Temperature Controlled Local Microwave Hyperthermia at 2.45 GHz

R. Knochel, W. Meyer and F. Zywietz. "Dynamic 'In Vivo' Performance of Temperature Controlled Local Microwave Hyperthermia at 2.45 GHz." 1982 MTT-S International Microwave Symposium Digest 82.1 (1982 [MWSYM]): 444-447.

A microwave system was constructed, suitable for local heating of animal tumours. The system basically consists of a 2.45 GHz generator, operating in a pulsed power mode, a micro-thermocouple temperature monitoring equipment and different applicators. Performance was tested on phantom tissue and by heating solid rat tumours, revealing differences in the heating response of the control-loop when both cases are compared. The system is capable of heating the tumours to a desired temperature level (eq. 43 °C) and maintains temperature within ± 0.1°C during treatment.

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