

MICROWAVE OVEN IN MICROBIOLOGY

Pages with reference to book, From 257 To 257

Editor, Reference to Microwave oven in microbiology laboratory, JPMA., 1992:42:2. In response to the queries by a microbiologist regarding the published paper we feel it would be appropriate to clarify the facts. 1. Sterilization in microwaves works on a different principle than the conventional autoclave and sterilization is independent of temperature, just like the principle of sterilization by ethylene dioxide or by radiation. In microwave heat is a byproduct and can be controlled by temperature probes in which case sterilization can be achieved even at 40°C. We like to add that bacteria, viruses or bacterial spores all contain water. Furthermore, blood agar is not a selective medium but is an enriched medium which would support the growth of almost all the organisms including anaerobes and aerobes. Microwave does not alter the constituents; as a matter of fact denaturing of ingredients in microwaves are less than in conventional oven. Finally we would like to say that microwaves are very safe and can safely be used in small laboratory for sterilization where there is less space and have limited finances as microwave sterilization is time and energy saving method.

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