Rodland, K. and P. J. Russell. **Effect of microwave radiation on conidial viability**

Microwave ovens are a recent innovation in many laboratories and are used for many applications such as media preparation and thawing of frozen stocks. Microwave radiation could be a valuable substitute for heat sterilization if it is capable of killing potentially contaminating microorganisms and conidia and destroying nuclease **activity.**

The effect of microwave radiation on conidial viability was tested by exposing replicate **samples of various volumes of a suspension of wild type** Neurospora crassa **conidia in deionized water (3.34 x 10^6 conidia/ml) to microwave radiation in a Sanyo microwave oven (output 2450 MH, at 450 Watts). Samples of the suspension were removed after 0, 5, 10, and 15 minutes and plated onto Vogel's complete medium. After 5 days of incubation at 25°C, the control plates containing conidia which had not been subjected to microwave radiation were overgrown, while none of the experimental plates showed any signs of conidial growth. Thus it appears that exposure to microwave radiation for as little as 5 minutes is sufficient to kill all conidia in suspension with volumes of 50, 100, 200, and 400 ml.**

In conclusion, the result of this experiment suggests that exposure of experimental solutions to microwave radiation may be an effective alternative to autoclaving in eliminating biological contaminants. (Supported by NIGMS, NIH grant GM26082.) * - **Biology Department, Reed College, Portland, Oregon 97202.**