

RISK ASSESSMENT AND MANAGEMENT OF MEDICAL WASTE

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Wastes generated from medical institutions are classified into infectious wastes and non-infectious wastes. Infectious wastes are designated as specially controlled wastes. As infectious wastes have risk of infection, sufficient attention should be paid for treatment of the wastes, and intermediate treatment such as sterilization and/or incineration are obligated before the final disposal. Until now, incineration is the favored method of medical waste treatment among the variety of intermediate treatments because of excellence in detoxification and volume reduction. However, in Japan, Dioxins emitted from incinerators have become serious social issue and small scale of incinerators are difficult to operate by constitution of a strict legal system. Therefore the increase in non-incineration system for the treatment of medical wastes will be expected in near future. In this study the safety evaluation of residue from intermediate treatment like incineration and non-incineration treatment such as a steam sterilization under pressure and an electromagnetic waves sterilization were performed using a battery of bioassays. According to the experimental results, bacteria and fungus were not found in the residues of the incineration treatment but those were found in non-incineration treatment. These results suggest that the incineration method is still excellent in sterilization.