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# Solar Disinfection of Water (SODIS)

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**Objective: To evaluate the efficacy of SODIS treatment in inactivating E-coli and Enterococcus faecalis in 1.5 L transparent PET (polyethylene terephthalate) plastic bottles and 19 L carbamide water dispensers.**

**Design: A Laboratory-Based Scientific Study.**

**Setting: Microbiology Unit, RCSI-MUB.**

**Method: 1.5 L transparent PET plastic bottles and 19 L carbamide water dispensers were filled with deionized water and inoculated with 1x10^6 bacteria/ml. The reactors were left in direct sunlight for 6 hours, which is the recommended time for SODIS treatment. Samples were taken periodically, and cell number, pH and temperature analysis was documented.**

**Result: Six-log decrease in bacteria concentration was observed in both of the reactors. There was no difference in terms of bacterial elimination in both reactors.**

**Conclusion: Both PET and carbamide water containers, 1.5 L and 19 L were efficiently cleared of bacteria when exposed to sunlight. Solar disinfection (SODIS) appears to be independent of the type of container.**

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