

Pol, R., Bachanek, T. Possibilities for Reducing Medical Waste Produced in the Process of Dental Instruments Sterilization. *Ochrona Srodowiska* 2014, Vol. 36, No. 4, pp. 57–60.

Abstract: Problem of waste produced in health care units, including dental practices, is particularly important in Poland. Medical waste requires appropriate classification, collection, segregation and utilization. Hence, in medical institutions procedures for dealing with this specific type of waste should contribute to limiting its volume. Microbiological purity of tools sterilized in different types of packaging was assessed. The results could help reduce amounts of waste produced by dental practices. Microbiological testing of dental instruments stored in different types of packaging was carried out, directly after sterilization as well as at different times in the process of storage. It was established that 40% of kits protected with paper and foil pouches was contaminated with microorganisms. However, microorganisms were not detected on kits without paper and foil laminate (metal tray with lid). Pathogens were present in 83% of the instrument kits sterilized in paper and foil pouches. The studies demonstrated that paper and foil packaging does not provide the stored dental instruments with full protection against microorganisms. In contrast, packaging such as metal tray with a lid or tray with an additional sealing ensures the dental tray/instrument kit stays sterile for at least 24 hours. Replacing disposable with multi-use packaging for dental instrument sterilization may significantly reduce the amount of dry medical waste difficult to utilize in the medical care units.

Keywords: Medical practice, paper and foil pouch, microbiological contamination, multi-use packaging, waste utilization.