

Amalgam Waste Management

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Introduction

Mercury is bioaccumulative and of particular environmental significance. Many countries have therefore introduced strict, mandatory limits on the levels of mercury in wastewater treatment plant effluents.

Dental clinics have been identified as one of the sources of mercury discharge into the environment. During placement or removal of amalgam restorations, waste particles are discharged into dental office wastewater through the suction system. Dental amalgam waste may potentially contribute to mercury in the environment through discharge into wastewater, sedimentation in sewage sludge, disposal in landfills and emission to the atmosphere through incineration of amalgam waste and sewage sludge. Chair side traps, vacuum pump filters and/or amalgam separators capture most of the amalgam waste particles.

Statement

- Dental staff should be trained to take appropriate measures to minimize the amount of waste and adopt best management practices for ensuring that all generated waste is properly disposed of in accordance with applicable environmental legislation.
- Dental offices should collect, store safely and forward for recycling as much of the amalgam waste as possible, regardless of whether or not it has been in contact with a patient. Such waste includes used amalgam capsules, excess amalgam that is not used in placing a restoration and amalgam waste retained in chair side traps, vacuum pump filters and amalgam separators. Extracted teeth restored with amalgam can also be recycled with other types of amalgam waste.
- If amalgam separators are to be installed in the dental clinic, they should comply with ISO 11143.

References

- FDI Science Committee Project 2-02: Jokstad A, Fan PL. Amalgam Waste Management. *Int Dent J*, 2006;56:147-53
- Vandeven JA, McGinnis SL. An assessment of mercury in the form of amalgam in dental wastewater in the United States. *Water, Air, Soil Pollut* 2005; 164: 349- 366.
- FDI Statement on Mercury Hygiene (Pending on General Assembly Approval 2006)
- ISO 11143 Dentistry – Amalgam Separators