FS No. 023-0823

Management of Waste from the ThinPrep™ Processor

BACKGROUND: The ThinPrep Pap Test is a method for the automated preparation of microscope slides for cervical cell samples. This liquid-based technology is used to replace the conventional Pap smear for cervical cancer screening. With ThinPrep, the cervical sample device is deposited in a vial filled with Hologic® PreservCyt™ solution; the vial is then forwarded to the lab. At the lab, the vial is inserted into a ThinPrep processor that removes the blood and mucus and homogenizes the cell population. The cells are spread in a thin layer, transferred onto a glass slide, and treated with a preservative solution.

SOLUTIONS: The ThinPrep process uses PreservCyt and CytoLyt™ solutions. The PreservCyt is a methanol-based, buffered preservative solution used to support cells during transport and slide preparation. The CytoLyt is a methanol-based, buffered preservative solution used to support cells during transport. Both PreservCyt and CytoLyt are toxic and flammable, with flashpoints of 78°F and 105°F, respectively.

MANAGEMENT OF WASTE: There are two waste streams generated with the ThinPrep process. The first waste stream is the excess PreservCyt solution that is left in the vial after testing. Each vial originally contains 20 ml of the methanol-based solution. Once the specimen is removed and processed, 1-19 ml of residual solution remains in the vial. Local procedures shall be followed to de-identify (e.g., black out, remove, mask, expunge) the patient's privacy act data on the vials prior to disposal, and how to dispose of the vials by either with the solution remaining in the vial (i.e., disposing of both together) or emptying each vial and collecting the solution separately for management and disposal as described below. Once emptied and the privacy data is removed, the vials can be disposed of as solid waste or recycled (if possible). The second waste stream is the waste that comes out of the ThinPrep processor, which is the methanol-based PreservCyt solution and possibly CytoLyt solution.

Since both types of liquid waste streams have low flashpoints—which remains in the vials and comes out of the processor—they need to be collected and managed as an ignitable hazardous waste with an Environmental Protection Agency hazardous waste number of D001. Although the manufacturer has stated that waste generated from the processor is not infectious, the hazardous waste disposal contractor may require the generator to provide a written verification stating as such.

The wastes should be collected at the point of generation at a hazardous waste Satellite Accumulation Area (SAA), and be properly managed, marked, and labeled. See APHC Technical Information Paper (TIP) No. 37-110-0722, *Hazardous Waste Accumulation Area Management*, for additional information on managing hazardous waste at: https://phc.amedd.army.mil/PHC%20Resource%20Library/ehse-waste-hazardous-waste-accumulation-area.pdf.

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