



Management Guidance for Barium Sulfate

FACT SHEET 37-008-1210

1. BACKGROUND. Barium sulfate formulations are used for radiological diagnostic procedures. One formulation is the "milkshake"; the other the "enema". Barium sulfate, the principle active ingredient in the two formulations, is a radiopaque compound used in the diagnostic procedures. Barium sulfate is insoluble in both water and dilute acids.

2. USED FORMULATIONS. Whether the radiological procedure involves taking the material orally or rectally, the patient uses most of the formulation. After the radiographs are taken, the patient will eventually pass the barium formulation when using the bathroom either at the health care facility or at home. The discharged formulation should not affect the sewage treatment plant and cause regulatory noncompliance.

3. UNUSED FORMULATIONS. Any unused portion from the milkshake or enema procedure should be poured into the toilet and flushed. As with the used formulations, this should not affect the sewage treatment plant and cause regulatory noncompliance. The empty container may be either discarded into the ordinary trash or it may be destroyed by putting it into a "red bag" used for regulated medical waste and subsequently managed as regulated medical waste. The choice between these two options depends upon how your state regulates medical waste. Wastewater treatment sludges on numerous Army installations have been given the Toxic Characteristic Leaching Procedure test and the results regularly show the leachable barium levels to be below the 100 milligrams per liter regulatory threshold in 40 Code of Federal Regulations, Part 261.24.

4. FIELD DISPOSAL. Field medical units are now receiving new equipment that will allow these barium formulations to be used as a diagnostic aid when the unit is operating in the field. Areas of use can range from training areas on CONUS installations to areas of armed conflict in "underdeveloped" countries. Use the same disposal methods as described above; rarity of procedures does not merit special waste handling procedures. Only host country requirements would modify the guidance provided here.

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