

Laboratory Waste Disposal Guidelines

Any waste (hazardous chemicals, bio-hazard waste, used syringes, tissues, face masks, and broken glass wares) generated by laboratories must be properly segregated, collected, stored in the proper lab's trash wastebasket (containers) and then it is the responsibility of the lab supervisor for their removal from the laboratories through proper cleaners.

Chemical wastes

Chemical waste includes solids, liquids or gases containing or contaminated with any of the chemicals like; Flammable solvents (*e.g.*, acetone, alcohols, acetonitrile); Leachate toxic materials (*e.g.*, heavy metals, pesticides); Corrosives (*e.g.*, hydrochloric acid, potassium hydroxide pellets); Reactives such as oxidizers, cyanides, sulphides, explosives, unstable materials and water-reactive materials (*e.g.*, sodium metal, benzoyl peroxide); Toxic materials including mutagenic, carcinogenic, acute or chronic toxicity materials (*e.g.*, chloroform, ethidium bromide); Polychlorinated biphenyls (> 50 ppm concentration); and Non-returnable gas cylinders.

Note:

- Wastes must be stored in containers compatible with the chemicals stored. For example, hydrofluoric acid waste must not be stored in glass containers, corrosive chemicals must not be stored in metal containers, etc.
- Solvent safety cans should be used to collect and temporarily store large volumes (10-20 litres) of flammable organic waste solvents.
- Do not insert precipitates, solids or other non-fluid wastes into safety cans.
- Never mix incompatible materials together in a single container. *e.g.* Acid-reactive compounds (*e.g.*, cyanides, sulphides) with inorganic acid (*e.g.*, sulphuric or hydrochloric acid); Organic acids (*e.g.*, glacial acetic acid) with inorganic acids; Water reactive materials (*e.g.*, sodium).
- Package halogenated and non-halogenated solvents separately, if possible.
- No abbreviations, acronyms or trade-mark names are to be used.
- Dispose of aging containers promptly. Some chemicals are time sensitive and may degrade into very hazardous by-products; *e.g.*, ethers may degrade to form explosive organic peroxides.
- Do not handle explosive materials. *e.g.* trinitrated compounds (*e.g.*, TNT), dry picric acid (<20% by weight water content), fulminated mercury, heavy metal azides (*e.g.*, lead azide). These materials require special handling for disposal.
- Ethidium bromide, should be packaged in leak proof plastic containers (no garbage bags) and disposed as chemical waste.
- Broken thermometers should be considered contaminated and all free liquid mercury should be collected and packaged in a leak-proof container, together with all contaminated solids such as glassware, gloves used during the clean-up, etc.

Biological Wastes

Biological waste includes liquids such as used cell culturing media, supernatant, blood or blood fractions (serum), etc., which contain viable biological agents; materials considered pathological, including any part of the human body, tissues and bodily fluids, but excluding fluids, extracted teeth, hair, nail clippings and the like that are not infectious; any part of an animal infected [or suspected to be infected] with a communicable disease; non-sharp, solid laboratory waste (empty plastic cell culture flasks and petri dishes, empty plastic tubes, gloves, wrappers, absorbent tissues, etc.) which may be, or is known to be, contaminated with viable biological agents; all sharp and pointed items used in medical care, diagnosis, and research, including the manipulation and care of laboratory animals, which should be considered potentially infectious; laboratory glassware which is known or suspected to be contaminated with hazardous biological agents.

Note:

- Inactivate the biological agents by employing either chemical disinfection or steam sterilization procedures.
- Containers of liquid waste must be placed into an autoclavable tray or pan of sufficient capacity to contain all liquid in the event of vessel failure or breakage inside the autoclave chamber. Use extreme caution when handling autoclaved liquids since they are hot and may boil over.

Sharp Wastes

hypodermic, surgical, suture, or IV needles, syringes with needles, lancets, scalpels, blades and similar metallic sharp or pointed items for disposal that can cause punctures, cuts, or tears in skin or membranes.

Labels

Broken Glass	Biological Waste: Non-infectious	Biohazard	Chemical Waste	Needles and Sharps																																																		
<p>Kingdom of Saudi Arabia Ministry of Education King Khalid University College of Pharmacy</p> <p>المملكة العربية السعودية وزارة التعليم جامعة الملك خالد كلية الصيدلة</p> <p>Broken Glass</p> <p>Building: Room No.: Date: Contact Person: Phone:</p> <table border="1"> <thead> <tr> <th>Waste composition</th> <th>Quantity</th> </tr> </thead> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table> <p>To Request a waste Pick-up, contact Education Services Committee</p>	Waste composition	Quantity									<p>Kingdom of Saudi Arabia Ministry of Education King Khalid University College of Pharmacy</p> <p>المملكة العربية السعودية وزارة التعليم جامعة الملك خالد كلية الصيدلة</p> <p>Biological Waste: Non-infectious</p> <p>Do not use examples or abbreviations</p> <table border="1"> <thead> <tr> <th>Item name</th> <th>Composition</th> </tr> </thead> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table> <p>To Request a waste Pick-up, contact Education Services Committee</p>	Item name	Composition									<p>Kingdom of Saudi Arabia Ministry of Education King Khalid University College of Pharmacy</p> <p>المملكة العربية السعودية وزارة التعليم جامعة الملك خالد كلية الصيدلة</p> <p>Biohazard</p> <p>Do not use examples or abbreviations</p> <table border="1"> <thead> <tr> <th>Item name</th> <th>Composition</th> </tr> </thead> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table> <p>To Request a waste Pick-up, contact Education Services Committee</p>	Item name	Composition									<p>Kingdom of Saudi Arabia Ministry of Education King Khalid University College of Pharmacy</p> <p>المملكة العربية السعودية وزارة التعليم جامعة الملك خالد كلية الصيدلة</p> <p>Chemical Waste</p> <p>Do not use examples or abbreviations</p> <table border="1"> <thead> <tr> <th>Item name</th> <th>Composition</th> </tr> </thead> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table> <p>To Request a waste Pick-up, contact Education Services Committee</p>	Item name	Composition									<p>Kingdom of Saudi Arabia Ministry of Education King Khalid University College of Pharmacy</p> <p>المملكة العربية السعودية وزارة التعليم جامعة الملك خالد كلية الصيدلة</p> <p>Needles and Sharps</p> <p>Do not use examples or abbreviations</p> <table border="1"> <thead> <tr> <th>Item name</th> <th>Composition</th> </tr> </thead> <tbody> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> <tr><td></td><td></td></tr> </tbody> </table> <p>To Request a waste Pick-up, contact Education Services Committee</p>	Item name	Composition								
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