

Cytotoxic Drugs



Krystyn Dubicki,
Williams lab

Definition and Examples

OHS Regulation defines a cytotoxic drug as:

“an agent that possesses a specific destructive action on certain cells or that may be genotoxic, oncogenic, mutagenic, teratogenic, or hazardous to cells in any way and includes most anti-cancer drugs”.

Examples of cytotoxic drugs

- Cyclosporin
- Cisplatin
- Estradiol
- Isotretinoin
- Methotrexate
- Tamoxifen

Exposure and Safe Handling

Routes of exposure:

- Direct/Indirect skin contact
- Inhalation
- Percutaneous exposure (needlestick)
- Ingestion

Examples of Safe Handling:

- All work with cytotoxic drugs must be completed in a Class II, Type B biological safety cabinet
- Must wear full PPE (double gloves, lab coat, eye protection, shoe covers) approved and tested for work with cytotoxic agents
- Thoroughly wash hands before leaving the lab

Proper Decontamination and Disposal

Decontamination

- Wipe contaminated surfaces with deactivating agent such as diluted bleach or isopropyl alcohol, followed by several water rinses
- Wear N95, R95, P95, or respirator during spill clean up

Waste Disposal

- Contain waste separately from other hazardous chemical waste
- Double bag waste and seal inside a hard sided plastic container