Chemical High-level Disinfection (HLD)

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OBJECTIVES

- To provide staff with guidelines for the use of high-level disinfectants (HLD).
- To provide safety guidelines for staff verifying the Minimum Effective Concentration (MEC).
- To provide guidelines for the clean-up of chemical HLD spills.

APPLICABILITY

Compliance with this document is required by all Alberta Health Services employees, members of the medical and midwifery staff, students, volunteers, and other persons acting on behalf of Alberta Health Services (including contracted service providers as necessary) working within Medical Device Reprocessing and Operating Rooms.

Note: Site specific procedures shall be developed and followed based on the specific equipment that is used.

ELEMENTS

1. Semi-critical devices requiring HLD
   - 1.1 The Spaulding Scale assigns risk classification for all medical devices.
     Semi-critical devices include but are not limited to:
     a) Flexible Endoscopes and Accessories;
     b) Diagnostic and Therapeutic Probes;
     c) Transesophageal Probes (TEE Probes).
   - 1.2 Clean and rinse all reusable semi-critical medical devices, according to the manufacturer's instructions for both the device and the cleaning product, before high-level disinfection.
2. Control test for chemical HLD test strips
   - 2.1 Refer to Manufacturer's Instructions for Use (MIFU).
   - 2.2 Document results (as per site procedure)
3. Testing solution for minimum effective concentration (MEC) prior to each use
   - 3.1 Follow the MIFU for the Chemical HLD Solution.
   - 3.2 Document the results of the MEC test on log sheet.
   - 3.3 Discard chemical HLD solutions as per MIFU if the test strips indicate a concentration above or below the MEC (failed test).

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3.4 Discard as per MIFU. If the solution is discarded in the drain, flush drain thoroughly with water.

4. High-level disinfection

4.1 HLD can be achieved either mechanically using an automated reprocessing unit or manually using a soaking method with chemical HLD.

4.2 Manufacturer's instructions are to be followed when using any chemical HLD.

4.3 HLD shall not be used beyond their expiry date.

4.4 Documentation is required for each device processed, and chemical HLD used, as per site-based procedure.

4.5 Chemical HLD products can be toxic therefore all safety requirements are to be followed as per WHMIS, and Safety Data Sheets (SDS) are to be maintained and available to all staff handling products.

4.6 Any chemical HLD products used must have a Health Canada Drug Identification Number (DIN) or medical device license.

4.7 Chemical HLD products include but are not limited to:

a) Glutaraldehyde;

b) Ortho-Phthalaldehyde (OPA);

c) Paracetic Acid;

d) Hydrogen Peroxide.

4.8 Follow site-specific procedure for the use of chemical HLD.

DEFINITIONS

None

REFERENCES

- Non-Alberta Health Services documents
  - *Canadian Medical Device Reprocessing*. (Canadian Standards Association) (CAN/CSA-Z314-18)
  - *Reusable & Single-Use Medical Devices Standards*. (Government of Alberta-Alberta Health) (September 2019)
  - *Infection Prevention and Control for Flexible Gastrointestinal Endoscopy and Flexible Bronchoscopy* (Public Health Agency of Canada)
  - *Standards of Infection Control in Reprocess of Flexible Gastrointestinal Endoscopes* 2012) (Society of Gastroenterology Nurses and Associates)
  - *Steris™ Revital-Ox™ Resert High Level Disinfectant Pamphlet* (4440-INCAJ91215)

VERSION HISTORY

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