**ENVIRONMENTAL CLEANING MODULE SUPPLEMENTARY INFORMATION**

**DISINFECTANTS FOR USE IN HEALTH CARE FACILITIES**

| **Disinfectant** | **Advantages** | **Disadvantages** |
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| **Low-level disinfectant:** Quaternary ammonium compounds  e.g., alkyl dimethyl benzyl ammonium chloride, alkyl dimethyl ethylbenzyl ammonium chloride  **Spectrum of activity**  Bactericidal  Virucidal (only enveloped viruses)  Fungicidal | Toxicity:   * + May be used on food contact surfaces.   Wide material compatibility   * + Noncorrosive   Detergent properties, with good cleaning ability  Low cost | Toxicity:   * + Skin irritant, can also cause respiratory irritation   *Narrow microbiocidal spectrum*   * + Not mycobactericidal or sporicidal, only limited activity against non-enveloped viruses   + Diluted solutions can support growth of microorganisms, particularly gram negative organisms.   Affected by environmental factors:  Activity reduced by various materials (e.g., cotton, water hardness, microfiber cloths, organic material).  Could induce cross resistance with antibiotics.  Persists in the environment and waterways. |
| **Intermediate-level disinfectant:** Alcohols (60-80%)  e.g., isopropyl alcohol, ethyl alcohol, and methylated spirits  **Spectrum of activity**  Bactericidal  Virucidal  Fungicidal  Mycobactericidal | *Broad spectrum (but not sporicidal)*  Rapid action  Nontoxic  Non-staining, no residue  Noncorrosive  Low cost  Good for disinfecting small equipment or devices that can be immersed | Slow acting against non-enveloped viruses  Does not remain wet.   * + Rapid evaporation makes contact time compliance difficult (on large environmental surfaces).   Affected by environmental factors:   * + Inactivated by organic material.   Material compatibility:   * + Can damage materials (plastic tubing, silicone, rubber, deteriorate glues).   Flammable |
| **Intermediate-level disinfectant:** Chlorine releasing agents  e.g., bleach/sodium or calcium hypochlorite, sodium dichloroisocyanurate (NaDCC)  **Spectrum of activity**  Bactericidal  Virucidal  Fungicidal  Mycobactericidal  Sporicidal (hypochlorites only at 5000ppm or 0.5%) | *Hypochlorites are broad spectrum* (sporicidal)  Rapid action  Nonflammable  Low cost  Widely available  Can reduce biofilms | Affected by environmental factors:   * + Inactivated by organic material.   High toxicity:   * + Can release toxic chlorine if mixed with acids or ammonia.   + Skin and mucous membrane irritant.   Material compatibility:   * + Damages fabrics, carpets.   + Corrosive   Leaves residue, requires rinsing or neutralization.  Offensive odors  Poor stability:   * + Subject to deterioration if exposed to heat and UV. |
| **Intermediate-level disinfectant:** Improved hydrogen peroxide  e.g., 0.5% enhanced action formulation hydrogen peroxide, 3% hydrogen peroxide  **Spectrum of activity**  Bactericidal  Virucidal  Fungicidal  Mycobactericidal  Sporicidal (only at 4-5%) | Rapid action  Nontoxic  Detergent properties, with good cleaning ability  Not affected by environmental factors   * + Active in the presence of organic material   Safe for environment | Material compatibility:   * + Contraindicated for use on copper, brass, zinc, aluminum   High cost |