Fact Sheet

Safe use of ortho-phthalaldehyde (OPA)

OPA solutions are high level instrument-grade disinfectants used in many SA Health healthcare facilities that perform medical procedures using devices or instruments requiring high level disinfection. The active ingredient is ortho-phthalaldehyde (usual concentration 0.55% to 0.57%) which has a wide spectrum of antimicrobial activity and achieves a high level of disinfection when used correctly.

This document outlines details for the safe use of OPA. For complete information on the spectrum of antimicrobial activity, materials compatibility and directions for use, see individual manufacturer’s product information and safety data sheet (SDS).

Indications for Use

OPA solutions are intended for use in manual or automated systems. Where manual disinfection is undertaken the containers utilised should be made from polypropylene, acrylonitrile-butadiene-styrene (ABS), polyethylene, glass-filled polypropylene or polycarbonate plastics. OPA solutions may also be used in an automated endoscope reprocessor (AER) that can be set to 25°C, provided it is used according to the manufacturer’s instructions.

When a medical/dental device is reprocessed in OPA solution the device must first be cleaned according to the manufacturer’s Directions for Use. Additional information may be found in the facility’s validated cleaning protocol for the device and AS/NZS 4187-2014 Reprocessing of reusable medical devices in health service organizations.

OPA solutions may be safely re-used for a limited time period in accordance with the manufacturer’s instructions and provided the solution is above the Minimum Effective Concentration as determined by the product test strips prior to each occasion of use.

Device compatibility

If questions arise regarding the compatibility of a device with OPA solution, contact the device manufacturer.

Contraindications

OPA solution is not the method of choice for sterilisation of rigid endoscopes that enter sterile tissue (i.e. laparoscopes and arthroscopes) and for which the endoscope manufacturer indicates compatibility with sterilisation processes.

OPA solution should not be utilised to process any urological instrument used to treat patients with a history of bladder cancer. In rare instances, OPA solution has been associated with anaphylaxis-like reactions in bladder cancer patients undergoing repeated cystoscopies.

OPA solution should not be utilised to process instrumentation for patients with known sensitivity to OPA solution or any of its components.
Warnings

It is important that a Safety Data Sheet (SDS) for OPA solution is available at the point of use and is easily accessible as it provides directions for safe use of the chemical product, including directions for the management of spills, storage and handling of the chemical.

1. **May elicit an allergic reaction**
   Possible allergic reactions have been reported in rare instances where health care workers were not using the product in a well-ventilated room or not wearing proper personal protective equipment.

2. **Avoid contact with eyes, skin or clothing**
   Direct contact with eyes may cause irritation. In case of eye contact, wash out immediately with running water for 15 minutes.
   Direct contact with skin may cause temporary staining. Repeated contact with skin may cause skin sensitisation. In case of skin contact, wash immediately with water.

3. **Avoid contamination of food.**
   DO NOT SWALLOW. Ingestion may cause irritation or chemical burns of the mouth, throat, oesophagus and stomach.
   If swallowed, contact a doctor or Poisons Information Centre immediately. DO NOT INDUCE VOMITING. Drink large quantities of water. Probable mucosal damage from oral exposure may contraindicate the use of gastric lavage.

4. **Avoid exposure to ortho-phthalaldehyde vapours**
   Exposure to vapours may be irritating to the respiratory tract and eyes. Exposure may cause a stinging sensation in the nose and throat, discharging eyes, coughing, chest discomfort and tightness, difficulty with breathing, wheezing, tightening of throat, urticaria (hives), rash, loss of smell, tingling of mouth or lips, dry mouth or headache. Vapours may aggravate a pre-existing asthma or bronchitis condition.
   In case of an adverse reaction from inhalation of vapour, move immediately to fresh air. If breathing is difficult, oxygen may be given by qualified personnel. If symptoms persist, seek medical attention.
   DO NOT form a spray, mist or aerosol with this product.

Rinsing Instructions

ALWAYS follow the manufacturer’s Directions for Use - Rinsing Instructions otherwise residues of OPA solution may remain on the device. Failure to follow rinsing instructions exactly has resulted in reports of chemical burns, irritation, and staining of the mouth, throat, oesophagus and stomach of patients.

Precautions

It is important that a method for filling/emptying containers used in manual processes is established which does not put the worker at risk. Automated dispensing systems are available on the market which can be programmed to dispense the required amount of OPA needed. OPA solution must be used in a well-ventilated area in closed containers with tight-fitting lids. If adequate ventilation is not provided by the existing air conditioning system, use under local exhaust hood, or under ductless fume hood or portable ventilation device. These should contain filter media that absorbs ortho-phthalaldehyde from the air.
Personal Protective Equipment

Personal protective equipment should be worn by workers handling OPA to minimise the risk of exposure and adverse health effects, including use of:

- double gloving (using latex gloves), or chemical resistant nitrile gloves
- eye protection (goggles or face shield)
- fluid-resistant gown
- correctly fitted carbon impregnated P2 respirator.

User Training

The user should be adequately trained in the decontamination and disinfection of medical devices and the handling of liquid chemical disinfectants.

Disinfectant/Container Disposal Information

Disinfectant Disposal

All solutions containing OPA must be neutralised to inactivate these materials before disposal to sewer. Solutions containing OPA can be neutralised using glycine powder or an approved neutralising agent. The final concentration of treated solutions must not exceed 200 mg/L active OPA.

OPA solution DOES NOT need to be neutralised if it is used in an automated endoscope reprocessor as a SINGLE USE disinfectant, providing the final concentration of OPA in the discharge does not exceed 200mg/L

Container Disposal

Do not reuse empty container. Dispose of the container in accordance with facility policy and the Environmental Protection Authority's regulations and guidelines.

References


For more information

Infection Control Service
Telephone: 1300 232 272

Workforce Health
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