



Mongolian Emergency Service Hospital Hygiene Project

MeshHp.mn

Ethylene oxide

Physical/chemical characteristics

EO is carcinogenic for humans (Group 1) (IARC 2008)

Explosive, flammable

Colorless gas

Sweet smell

Irritating for eyes, respiratory system and skin

Heavier than air

Structural requirement

No use in rooms which are used by humans

Exhaust pipe should end 3 m distance from the building

Room ventilation with 8 – 12 fold air exchange, top to down

Construction of sterilizer

Usual steps of working:

- Filling the sterilization chamber with instruments (wrapped!), closing the door
- Evacuation of the chamber (pre-vacuum)
- Humidifying of instruments
- Stream in of gas
- Sterilization (time!)
- Evacuation of the sterilization chamber
- Alternating Ventilating with sterile air/evacuation
- End of sterilization

Leak test of sterilization chamber

Automatic?

Manual?

Outgasing:

No outgasing in rooms!!

Different sterilisers re outgasing

Unterschiedliche Geräte bezüglich Ausgasung:

- Only short phases for fresh air and vacuum. Degassing of instruments in ventilated cupboards or rooms. End of sterilisation may be decided by user: take care of high gas concentrations!
- Longer phases for fresh air and vacuum phases. Post vacuum phase may be possible before taking out the instruments.

- Phases with fresh air and vacuum. After that degassing program for 8-12 hours with alternating fresh air and vacuum phases.

Careful outgassing:

- Sterilizer with degassing programme; depends on time of degassing
- Degassing cabinet
- 50 fold air exchange in degassing rooms
- Storage only in ventilated cabinets or rooms

Documentation:

First degassing, then allowing for use

Documentation of

- Staff
- Date
- Charge number
- Instruments
- End of outgassing

Documentation of bottle change, documentation of servicing

Precautions:

Before starting the procedures must be known:

Next phone

Emergency call number

Where to go in case of emergency

Water connection (to clean split parts of the body)

Highest risk for keeping in contact with EO:

loading of sterilizer,
change of gas bottles

Measurement?

Behavior in accident

Inhalation: dizziness, headache, coughing, dyspnea, possible unconsciousness

Leave the room instantly

Stop gas outlet

Ventilation

Remove wet clothing

Rinse contaminated body parts at least 15 minutes

Consult a physician

Use inhalative cortisone in case of dyspnea