

About Citrogen

Citrogen is a liquid concentrate with a single step process used to disinfect and decalcify Hemodialysis machine. It is a very effective disinfectant because of the synergistic effects of its natural ingredient.

Mode Of Action

Destructing the phospholipid layers in the cell membrane;
Disturbance of the intracellular pH balance;
Activity strongly increased by an increase in temperature, ie. at 83°C with exposure time of 15 minutes gives excellent virucidal, bactericidal, fungicidal, tuberculocidal properties.

Decalcification:

Formation of Ca/Mg salts or salt complexes helps in removal of calcium and magnesium deposits to reduce Hemodialysis machines breakdown.

Biofilm Elimination

The combination of cleaning with citric acid (Citrogen) followed by heat disinfection was the most effective in eliminating all biofilm components from the hydraulic circuit of Hemodialysis machine.

Citrogen meets various disinfecting cycles of Hemodialysis Machine through use of Citric acid (Citrogen), particularly following a bicarbonate dialysis

- Thermal disinfection •Chemical disinfection •Short- term chemical disinfection
- Decalcification •The dialysis fluid filter disinfection

Direction for use:

1. Citrogen should be fitted to the machine
2. Citrogen should be heated ($\geq 60^{\circ}\text{C}$) for efficient results.
3. Ensure that power and water supply to the machine are operational.
4. Turn on the machines.
5. Important steps to be taken into consideration before activating the disinfecting program:
 - (a.) The dialysate lines are connected to the shunt (Rinse bridge).
 - (b.) The shunt door is closed.
 - (c.) The concentrate suction tubes are in the appropriate rinse ports.
 - (d.) The interlock plate of the bigbag connector (option) is closed.
 - (e.) The optical detector does not sense blood.
6. Press cleaning key.
7. It is not necessary to test residual citric acid if Citrogen is used, since it is a decaying agent which is formulated in a non-toxic solution.

* Disinfection with Citrogen may be performed after each dialysis session or at least once daily.



Composition:

Citric acid
Lactic acid
Malic acid

*Active ingredients are listed by DGHM (German Society for Hygiene and Microbiology)

Salient Features:

- ▶ Disinfection
- ▶ Decalcification
- ▶ Dissolves blood residue
- ▶ Biodegradable
- ▶ Non-toxic (natural ingredients)
- ▶ **Residual disinfectant testing is not required**

CDC Quotes

Reference: CDC guidelines for disinfecting and sterilization in health care facilities, 2008, Disinfection in hemodialysis unit.

1. Disinfection of hemodialysis machine before its use on a successive patients.
2. "Hemodialyzers are disinfected with heat pasteurization with citric acid".

Product Specification:

Form	: Liquid
Colour	: Colourless
Odour	: Odourless
pH-value	: Acidic
Shelf life	: 2 years at 5-25°C
Consumption	: Approx. 82/90/96ml per cycle depending on machine model and disinfection cycle
Pack size	: 5 Litres