

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name:
CA-50L

Revision Number:
4.0

Synonyms:
50% Citric Acid Solution USP
2-hydroxy-1,2,3-propanetricarboxylic acid

Use of the Substance / Preparation:
Heat disinfection acid rinse, decalcification,
and biofilm removal for hemodialysis machines.

Company Name:
Di-Chem, Inc.
12297 Ensign Ave N
Champlin, MN 55316
763-422-8311

Emergency response telephone number:
CHEMTREC (US): 1-800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview:
Warning. Irritating to eyes. Corrosive to metals. Product vapor/mist may cause mild, mechanical irritation.

Appearance:
Clear to Yellow Liquid

Physical State:
Liquid

Odor:
Odorless

GHS Classification:

Serious Eye Damage / Eye Irritation

Category 2

Hazards Not Otherwise Classified

None

GHS Label Elements:

Signal Word:

Warning

GHS Hazard Pictogram(s):



Hazard Statement(s):

H319 Causes serious eye irritation.
H335 May Cause respiratory irritation.

Precautionary Statement(s):

P261 Avoid breathing vapor/mist.
P264 Wash exposed skin thoroughly after handling.
P351 If in eyes: Rinse cautiously with water for several minutes.
P313 If eye irritation persists: Get medical advice.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:	Molecular Formula:	CAS-No:	Weight %:
Citric Acid	C ₆ H ₈ O ₇	77-92-9	50
Water	H ₂ O	7732-18-5	50

4. FIRST AID MEASURES

Eye Contact:	Immediately flush with plenty of water. If symptoms persist, call a physician.
Skin Contact:	Wash off exposed area with soap and plenty of water. If skin irritation persists, call a physician.
Ingestion:	Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. If symptoms persist, call a physician.
Inhalation:	Move to fresh air. If symptoms persist, call a physician.
Note to Physicians:	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties:

Not Flammable.

Extinguishing Media:

Dry chemical; Carbon dioxide (CO₂); Water spray; Foam.

Unsuitable Extinguishing Media:

No information available.

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health	1	Flammability	0	
Stability and Reactivity	0	Physical hazard	None known	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with the skin and the eyes. Use personal protective equipment.
Environmental Precautions:	Prevent further leakage or spillage if safe to do so.
Methods for Clean up:	Clean up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal. Aqueous spillage should be soaked up with inert absorbent material. For disposal information see section 13.

7. HANDLING AND STORAGE

Handling:	Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Use in areas provided with appropriate ventilation. Avoid formation of aerosols.
Storage:	Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep away from incompatible substances.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

This product contains no substances with occupational exposure limit values.

OSHA - Permissible exposure limit (PEL): Not established

ACGIH - Threshold limit value (TLV): Not established

General Hygiene Considerations:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Engineering Controls:

Adequate ventilation. Eyewash stations.

Personal Protective Equipment (PPE)

Eye/Face Protection:	Safety glasses or goggles.
Skin and Body Protection:	If irritation is experienced wear gloves and suitable protective clothing to avoid skin contact.
Respiratory Protection:	If irritation is experienced wear a NIOSH-approved mask/respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear to Yellow Liquid
Physical State	Liquid
Odor	Odorless
Odor Threshold	Not applicable
pH	Not available
Dissociation Constants (pKa)	Not available
Flash Point	Not available
Autoignition Temperature	Not available
Boiling point	Not available
Melting/Freezing Point	Not available
Decomposition temperature	Not available
Oxidizing Properties	Not available
Flammability Limits in Air	Not flammable
Explosion Limits	Not explosive
Solubility(ies)	
Water Solubility	Not available
Specific Gravity	1.24 g/cc
Relative Density	Not available
Bulk Density	Not available
Explosive Properties	Not explosive

10. STABILITY AND REACTIVITY

Stability: Not applicable. Stable under normal conditions.

Conditions to Avoid: Heat. Moisture. Incompatibles.

Incompatible Materials: Metal nitrates. Amines. Heavy metals. Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products: Thermal decomposition can lead to release of irritating gases and vapors Carbon monoxide (CO) Carbon dioxide (CO₂).

Reactivity: Reactions with metal nitrates may be potentially explosive. Aqueous form is corrosive to copper, zinc, aluminum and their alloys.

11. TOXICOLOGICAL INFORMATION

Product Information:

Acute Toxicity: 0% of the mixture consists of ingredient(s) of unknown toxicity. The following values are calculated based on chapter 3.1 of the GHS document.

Chemical Name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
Citric acid	3000 mg/kg (Rat)		

Chronic Toxicity:

Carcinogenicity: This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not classified for aquatic toxicity. Contains no substances known to be hazardous to the environment. Contains no substances known to be not degradable in wastewater treatment plants.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia (Water flea)
Citric acid	NOEC (8d): 425mg/l	LC50 (48h): 440mg/L (Leuciscus idus)	EC50 (24h): 1535mg/L

Persistence/Degradability: Readily biodegradable. Inherently biodegradable. 97% and 100% biodegradability in 28d and 19d, respectively (protocols OECD 301E and OECD 301A, respectively).

Mobility: Soluble in water.

Bioaccumulation: Substance not considered to be persistent, bioaccumulating nor toxic (PBT).

13. DISPOSAL CONSIDERATIONS

Waste from Residues/Unused Products: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Packaging: Empty containers should be decontaminated and taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT – Not Regulated
TDG – Not Regulated
MEX – Not Regulated
ICAO – Not Regulated
IATA – Not Regulated
IMDG/IMO – Not Regulated

15. REGULATORY INFORMATION

International Inventories:

All of the components in the product are on the following Inventory lists:

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	AICS	ENCS ISHL	CHINA	PICCS	KECL	NZLoC
Citric acid	Yes	Yes	No	201-069-1	No	Yes	(2)-1318	Yes	Yes	KE-20831	No

US Federal Regulations:

CERCLA:

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

SARA 313:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals, which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization:

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

US State Regulations:

California Proposition 65: This product does not contain any Proposition 65 chemicals.

No known components subject to "Right-To-Know" legislation in the following States: Massachusetts, Minnesota, New Jersey, Pennsylvania.

16. OTHER INFORMATION

Prepared By: Di-Chem, Inc.

Original Preparation Date: 14-May-2015

Revision Date: 01-December-2025

Revision Number: 4.0 - This version replaces all previous versions.

HMIG Rating

Health: 1

Flammability: 0

Reactivity: 0

Personal protection: A

Disclaimer:

Please be advised that it is your responsibility to inform your employees of the hazards of this substance, to advise them of what these properties mean and be sure they understand exposure information. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification.

END OF SAFETY DATA SHEET