

## Sodium Citrate Antigen Retrieval Buffer Safety Data Sheet (SDS)

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

Product Name: Sodium Citrate Antigen Retrieval Buffer  
Part NO.: PR30001

**Chemical Name:** Not applicable

**REACH registration number:** No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

Company/undertaking Identification:

Proteintech Group  
5500 Pearl Street  
STE 300  
Rosemont, IL 60018  
312-455-8498  
proteintech@ptglab.com

Emergency telephone number:  
312-455-8498

### 2. HAZARDOUS IDENTIFICATION:

GHS Classification of the substance or mixture

Eye Irritation	Category 2
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**GHS label elements**

**Pictogram:**



**Signal word:** Warning

**Hazard statements:**

H332 – Harmful if inhaled

H373 – May cause damage to organs (Respiratory Tract)

**Precautionary statements:**

P304+P340+P312 – If INHALED: Remove person to fresh air and keep comfortable. Call a poison center or doctor if not feeling well.

P314 – Get medical advice/attention if you feel unwell.

P501 – Dispose of contents/container to an approved waste disposal plant.

P264 – Wash hands thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P321 – Specific treatment (see supplemental first-aid measures on this label).

P362 – Take off contaminated clothing.

P302+P352 – IF ON SKIN: wash with plenty of water.

P332+P313 – IF SKIN irritation occurs: Get medical advice/attention.

P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P337+P313 – IF eye irritation persists: Get medical advice/attention.

Hazards not otherwise classified: None known.

### 3. INGREDIENT COMPOSITION/INFORMATION:

Mixture of the substances listed below, and additional trade secret chemicals.

Trisodium Citrate	1-5%	68-04-2
Citric Acid	1-5%	77-92-9

### 4. FIRST AID MEASURES:

General Advice	Consult a physician. Show this Safety Data Sheet to the doctor in attendance.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. Get medical attention if symptoms occur. If symptoms persist, consult a physician.
Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute, and delayed  
Potential acute health effects  
Skin contact: May cause sensitization of susceptible persons.

Over-exposure signs/symptoms

Skin contact: Repeated contact may cause allergic reactions in very susceptible persons. Avoid Repeat exposure

Ingestion: Repeated ingestion may cause damage to kidneys. Avoid Repeat Exposure

Repeat Exposure

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11).

### 5. FIRE FIGHTING MEASURES:

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: No information available

Specific hazards arising from the chemical: In a fire or if heated, a pressure increase will occur, and the container may burst.

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment, and emergency procedures:

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Methods and materials for containment and cleaning up:

Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill: Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## 7. HANDLING AND STORAGE:

Use only in area provided with exhaust ventilation. Avoid contact with skin, eyes, and clothing. Wear appropriate protective clothing (Section 8).

Keep container tightly closed, and in a cool, well-ventilated area. Store at 2-8°C. When the kit is in use, place at room temperature or up to 37°C. This buffer is heated to 95-100°C during use.

Precautions for safe handling:

Protective measures: Put on appropriate personal protective equipment (see Section 8)

Advice on general occupational hygiene: Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities: Do not store above the following temperature: +2°C to +8°C. Store in accordance with local regulations. Store in original container protected from light in a dry, cool, and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## 8. EXPOSURE CONTROLS/PPE:

Control parameters:

Occupational exposure limits: Not available.

Appropriate engineering controls: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures:

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period.

Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection:

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

Physical state @ 40°C: Solution

Color: clear to amber

Odor: Not available.

Odor threshold: Not available

pH: 6.0

Melting point: >135°C

Boiling point: Not available.

Flash point: Not available.

Burning time: Not applicable.

Burning rate: Not applicable

Evaporation rate: Not available.

Flammability (solid, gas): Not available.

Lower and upper explosive (flammable) limits: 2.29 kg/m<sup>3</sup> and 0.28 kg/m<sup>3</sup>

Vapor pressure: Not available.

Vapor density: Not available.

Relative density: p(20) 1.542 g/mL

Solubility: Soluble in water or aqueous buffers.

Partition coefficient: -1.72

Auto-ignition temperature: 1010

Decomposition temperature: Not available.  
SADT: Not available.  
Viscosity: Not available.

## 10. STABILITY AND REACTIVITY:

Reactivity: None known  
Chemical stability: Stable under normal conditions  
Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.  
Conditions to avoid: No information available  
Incompatible materials: Oxidizing agents, Bases, Reducing agents, Nitrates  
Hazardous decomposition products: Under fire conditions

## 11. TOXICOLOGICAL INFORMATION:

Information on toxicology effects:  
Acute toxicity: Not available  
Irritation/Corrosion: Not available.  
Sensitization: May cause sensitization of susceptible persons.  
Mutagenicity: Not available.  
Carcinogenicity: Not available.  
Reproductive toxicity: Not available.  
Teratogenicity: Not available.  
Specific target organ toxicity (single exposure): Not available.  
Specific target organ toxicity (repeated exposure): Oral – May cause damage to kidneys through prolonged or repeated exposure  
Aspiration hazard: Not available.  
Conclusion/Summary: To the best of our knowledge, the toxicological properties of this substance have not been thoroughly investigated.

Information on the likely routes of exposure: Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects:  
Eye contact: No known significant effects or critical hazards.  
Inhalation: No known significant effects or critical hazards.  
Skin contact: May cause sensitization of susceptible persons.  
Ingestion: May cause damage to kidneys with repeated exposure.

Symptoms related to the physical, chemical, and toxicological characteristics:  
Eye contact: No specific data.  
Inhalation: No specific data.  
Skin contact: No specific data.  
Ingestion: No specific data.

Delayed and immediate effects. Also chronic effects from short and long term exposure.  
Short term exposure: Not available.  
Potential immediate effects: Not available.  
Potential delayed effects: Not available.  
Long term exposure: Not available.  
Potential immediate effects: Not available.  
Potential delayed effects: Repeated contact may cause allergic reactions in very susceptible persons. Repeated ingestion may cause damage to kidneys.

Potential chronic health effects: Not available.  
General: No known significant effects or critical hazards.  
Carcinogenicity: No known significant effects or critical hazards.  
Mutagenicity: No known significant effects or critical hazards.  
Teratogenicity: No known significant effects or critical hazards.  
Developmental effects: No known significant effects or critical hazards.  
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates: Not available

## 12. ECOLOGICAL INFORMATION:

Data not yet available.

## 13. DISPOSAL CONSIDERATIONS:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION:

Not classified as dangerous in the meaning of transport regulations.

## 15. REGULATORY INFORMATION:

US Federal Regulations  
This mixture is not listed on the TSCA Inventory. This substance is not SARA listed.  
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs): Not listed  
Clean Air Act Section 602 Class I Substances: Not listed  
Clean Air Act Section 602 Class II Substances: Not listed  
DEA List I Chemicals (Precursor Chemicals): Not listed  
DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304:  
Composition/information on ingredients: No products were found. SARA 304 RQ: Not applicable.

SARA 311/312:  
Classification: Not applicable.  
Composition/information on ingredients: No products were found. State regulations:  
California Prop65: Not listed

International regulations:  
EU REACH: Not listed

## 16. OTHER INFORMATION:

Reason for revision: Initial release of SDS  
Revision number: 0  
Revision: 07/22/2022

The above information is believed to be correct but should only be used as a guide for experienced personnel. Proteintech Group Inc. will not be liable for any damage resulting from the handling of or from contact with the above product. This SDS does not purport to be all-inclusive.

*For lab use only, not for diagnostic or therapeutic work.*