



TECHNICAL DATA SHEET (TDS)

TRISODIUM CITRATE DIHYDRATE

Supplier: Basekim

Product Grade: Food Grade / Industrial Grade (subject to confirmation)

CAS Number: 6132-04-3

E Number: E331(iii)

1. Product Description

Trisodium Citrate Dihydrate is a white, crystalline, water-soluble sodium salt of citric acid. It functions as an acidity regulator, buffering agent, sequestrant, and emulsifying salt in various formulations.

Manufacturers commonly use this versatile compound in food processing, beverages, detergents, and industrial applications. Its excellent water solubility and buffering properties make it suitable for applications requiring controlled pH and formulation stability.

2. General Product Information

Property	Description
Product Name	Trisodium Citrate
Chemical Name	Trisodium Citrate Dihydrate
Synonyms	Sodium Citrate Tribasic Dihydrate
CAS Number	6132-04-3
E Number	E331(iii)
EC Number	200-675-3
Molecular Formula	$C_6H_5Na_3O_7 \cdot 2H_2O$
Molecular Weight	294.10 g/mol
Appearance	White crystalline powder or colorless crystals
Odor	Odorless
Solubility	Freely soluble in water



3. Technical Specifications

The following values represent reference food-additive specifications for trisodium citrate dihydrate, not certified results for a particular batch.

Parameter	Specification
Appearance	White crystalline powder or colorless crystals
Assay (Anhydrous Basis)	$\geq 99.0\%$
pH (5% Aqueous Solution)	7.5–9.0
Loss on Drying	10.0–13.0%
Oxalates (as Oxalic Acid)	≤ 100 mg/kg
Arsenic (As)	≤ 1 mg/kg
Lead (Pb)	≤ 2 mg/kg
Mercury (Hg)	≤ 1 mg/kg
Identification of Sodium	Passes Test
Identification of Citrate	Passes Test

Loss on drying test conditions: 180°C for 18 hours, according to the referenced EU specification.

Actual product specifications must be confirmed against the supplier's approved TDS and Certificate of Analysis.

4. Physical and Chemical Properties

Property	Typical Value
Physical State	Solid
Color	White
Odor	Odorless
pH (5% Solution)	7.5–9.0
Water Solubility	Freely soluble
Ethanol Solubility	Insoluble
Molecular Weight	294.10 g/mol
Hygroscopic Properties	Protect from moisture
Chemical Stability	Stable under recommended storage conditions



5. Main Applications

Food Industry

- Processed cheese manufacturing
- Beverage acidity regulation
- Dairy product stabilization
- Confectionery formulations
- Food buffering systems

Pharmaceutical Industry

- Buffering agents in suitable formulations
- Pharmaceutical excipient applications
- Specialized medical formulations requiring pharmaceutical-grade material

Industrial Applications

- Detergent manufacturing
- Cleaning formulations
- Water-based chemical processing
- Metal-ion sequestration
- Electroplating formulations

6. Packaging

Standard commercial packaging may include:

- 25 kg bags
- Moisture-resistant packaging
- Palletized shipments for bulk orders

Packaging availability and configuration must be confirmed before ordering.

7. Storage Conditions

Store in a cool, dry, and well-ventilated warehouse.

Keep containers tightly closed to prevent moisture absorption and contamination.

Avoid direct exposure to excessive heat and incompatible chemicals.



Maintain clean storage conditions, especially for food-grade products.

Shelf Life: Confirm the approved shelf life and retest date for the supplied batch.

8. Quality Control

Product quality should be verified using the following documentation:

- Certificate of Analysis (COA)
- Technical Data Sheet (TDS)
- Safety Data Sheet (SDS)
- Applicable grade-specific quality documentation

Food-grade compliance and pharmaceutical suitability must be confirmed separately for each supplied product.

9. Handling Recommendations

Avoid generating excessive airborne dust during handling.

Use appropriate protective equipment when transferring or processing the material.

Keep packaging sealed when the product is not in use.

Prevent contamination during transportation, storage, and manufacturing operations.

10. Disclaimer

This Technical Data Sheet provides reference information for Trisodium Citrate Dihydrate. Specifications may vary according to product grade, manufacturer, and customer requirements.

All technical specifications, quality certifications, packaging details, and shelf-life claims must be verified against the actual supplied product and its approved Certificate of Analysis before commercial publication or use.