



Trisodium Citrate

Trisodium citrate is a commonly used ingredient in a broad range of personal care products such as shower gels, shampoos and skin creams. It has proven to be an excellent buffering and chelating agent. Calcium and magnesium, but also iron and other metal ions form stable complexes with trisodium citrate, which has the advantage to be fully biodegradable and non-toxic. In combination with an acid, trisodium citrate counteracts pH fluctuations in the formulation and thereby prolongs the product's shelf life.

Presentation

Jungbunzlauer offers two forms of trisodium citrate: trisodium citrate dihydrate (TSC) and trisodium citrate anhydrous (TSA), being both covered under the INCI name "sodium citrate". The TSA crystals have a porous matrix that can be used as a carrier for liquid substances like surfactants, which is ideal for the production of water-free formulations. In addition, TSA is compressible and can thus be used in tablet applications.

Production

Trisodium citrate is a salt of citric acid. Citric acid is produced by a submerged fermentation process which employs a strain of the microorganism *Aspergillus niger* to convert sugar into citric acid. The salt of citric acid is obtained by neutralisation with a sodium source. TSA is manufactured by removing the water molecules of the TSC crystals by a patented process without destroying the original matrix.

Characteristics

Trisodium citrate occurs as white, granular crystals or as white, crystalline powder with a pleasant, salty taste. It is freely soluble in water and practically insoluble in ethanol (96%).

INCI name

Sodium Citrate

INCI functions

Buffering, chelating

Applications

Colour cosmetics, fragrances, hair care, oral care, skin care, soap and bath products


Functions and typical dosage

	Minimum recommended amount	Maximum recommended amount
■ Buffering	0.1%	2.0%
■ Chelating	0.2%	0.6%




Related documents

Formulation examples

 Water-free face scrub tablet with TSA

Articles

 Novel water-free face scrub tablet with Trisodium Citrate Anhydrous