



Jungbunzlauer

From nature to ingredients®

Tricalcium Citrate

Tricalcium citrate can be used in oral care applications as a gentle abrasive agent without damaging the tooth enamel. It also helps reducing caries while boosting teeth remineralisation. Combining exceptional compression characteristics and good flowability, tricalcium citrate works as a key ingredient in applications implying direct compression, such as tooth tabs for instance. In alginate-based peel-off clay masks, calcium citrate together with glucono-delta-lactone acts as a controlled release system for cross-linking of alginate. This system is very skin friendly due to its pH value of 5.3 and moisturising effect. Moreover, tricalcium citrate is applied in powder shampoo.

Presentation

Tricalcium citrate is the calcium salt of citric acid. With its high calcium content of 21%, tricalcium citrate is the most economic calcium salt among the commonly used organic calcium salts. Tricalcium citrate is available in different granulations from a free-flowing coarse granulation to very fine powder.

Production

Tricalcium citrate is produced by complete neutralisation of citric acid with a high purity calcium source and subsequent precipitation.

Citric acid itself is produced by a submerged fermentation process which employs a strain of the microorganism *Aspergillus niger* to convert sugar into citric acid.

Characteristics

Tricalcium citrate is a white, odourless powder or fine powder, which is very slightly soluble in water and insoluble in alcohol. In contrary to other salts, tricalcium citrate is better soluble at lower temperatures (so-called "inverse solubility"). During heat treatment, it is less reactive than other calcium salts due to its inverse solubility.

INCI name

Calcium Citrate

INCI functions

Buffering

Applications

Hair care, oral care, skin care, soap and bath products




Functions and typical dosage

	Minimum recommended amount	Maximum recommended amount
■ Buffering	0.1%	1.0%
■ Abrasive agent	20.0%	50.0%



Related documents

Formulation examples

-  Natural peel-off clay mask
-  Toothpaste for gentle cleansing
-  Tooth cleaning tabs

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