



Citric Acid

Citric acid is used as acidifier in a wide range of personal care products including shampoos, shower gels, creams and cleaners. In combination with a salt, citric acid acts as a buffering agent and counteracts pH fluctuations in the formulation. Consequently, it stabilises the pH value of the product and prolongs the product's shelf life. Being an excellent chelating agent, citric acid is also able to form stable complexes with metal ions.

Presentation

Citric acid is a naturally occurring fruit acid, produced commercially by microbial fermentation of a carbohydrate substrate. It is mainly used to achieve an acidic pH value in personal care products. Thanks to its high water solubility, citric acid can be easily incorporated in water-containing products. However, it is also a perfect ingredient for water-free formulations as it is available in the market as a crystalline powder.

Production

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 product undergoes several purification steps and is finally obtained in its highly pure form.

Characteristics

Citric acid occurs as colourless crystals or as white, crystalline powder. It is an odourless substance with an agreeable, though strongly acid taste. It is very soluble in water, freely soluble in ethanol and sparingly soluble in ether.

INCI name

Citric Acid

INCI functions

Acidifier, buffering, chelating

Applications

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

Functions and typical dosage

	Minimum recommended amount	Maximum recommended amount
■ Acidifying	-	3.0%
■ Buffering	0.1%	1.0%
■ Chelating	0.2%	0.4%



Related documents

Formulation examples

- | | |
|---|--|
|  Basic skin gel |  Natural hand cream |
|  Powerful hair gel |  Soothing hand cream |
|  Sulphate-free shampoo |  Body lotion for men |
|  Basic shower gel with beads |  Tooth cleaning tabs |
|  Moisturising face serum |  BB cream light SPF 50+ |
|  Micellar water | |