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Fruchtsaft- und Weintechnologie

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Citric acid E330 (Monohydrat)

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- Food additive to improve taste and shelf life and to stabilize grape wines against metal turbidity -

Technical information and instructions for use

Deposit and manufacture:
Citric acid is one of the edible acids found in many foods. It is added as an acidifier or to support other additives with a preservative or antioxidant effect. **Citric acid** occurs naturally in fruit, from which it can be isolated. However, industrial extraction by fermentation of sugary substrates with *Aspergillus niger* is much cheaper.

Properties and effect:
In its pure form, **citric acid** is available as a crystalline, highly water-soluble powder or granulate. **Citric acid** can be added to foods to enhance their **acidic taste**. This is associated with a lowering of the pH value, which improves the **shelf life** of many foods. The pasteurization of canned fruit and vegetables (fruit juices, jams, red cabbage) only results in products below certain pH values that can be kept for a long time at room temperature in their original sealed packaging. A sufficiently low pH value is also a prerequisite for the effectiveness of chemical preservatives such as sorbic or benzoic acid in unheated delicatessen salads, for example, which must be stored in a cool place.

Citric acid complexes heavy metals. This prevents metal turbidity in wines. This property also supports the effect of antioxidants such as ascorbic acid. These two acids are often used in combination in fruit and vegetable processing to delay browning and **preserve color and aroma.**
As **citric acid** is easily microbially degradable, it is not suitable for acidifying vegetable raw materials that are subsequently subjected to fermentation (e.g. distilling mashes).
Citric acid, on the other hand, is very suitable for **cleaning purposes**; for removing calcareous deposits (water scale, boiler scale) on glass, ceramic or stainless steel as well as the patina, e.g. in and on copper stills.

Application:
As a food additive, **citric acid** is added directly in crystalline form or initially pre-dissolved in a liquid formulation component and added to the formulation. **Citric acid** is used as a limescale remover, cleaning agent or to neutralize residues from previous alkaline cleaning as a warm or cold aqueous solution.

Food law:
EU Regulation No. 1129/2011 regulates the maximum doses of citric acid that may be added to foods. Where applicable, reference is made to product-specific guidelines or regulations.

Dosage examples:
Grape wine: To a total content of max. 1g/L
Fruit / honey wines: max. 3g/L
Jams: Unlimited
For purification: 0.5-15%

Analytical note:
0.93g citric acid monohydrate is analytically determined by titration as 1g tartaric acid.

Package sizes:

250 g Bag	(No. 5380)
1 kg Bag	(No. 5381)
25 kg Bag	(No. 5382)

Storage: Dry