

Ascorbic acid (E300)

Culinary data

Ascorbic acid, used preferably at a rate of 1g for 100g of final preparation or less, is an acidity regulator.

It enables to:

- replace lemon juice,
- to avoid oxidation
- or to reinforce dough roll.

Technological data

Dissolution

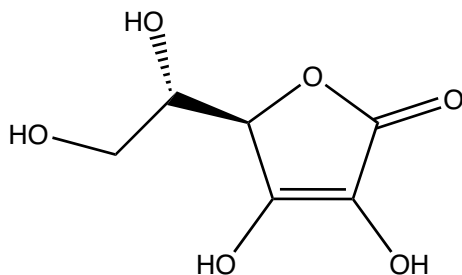
Ascorbic acid is very soluble in water: 250g/L at 20°C.
The amount usually used is ranging from 0.5 to 5g of ascorbic acid for 100g final preparation.

Storage

Maximal temperature 25°C
Air moisture < 60%.

Scientific data

The ascorbic acid or vitamin C is mainly present in fresh vegetables: fruits (citrus fruit for example), green vegetables, potatoes. Most animals can't synthesize it in order to protect themselves against oxidation.



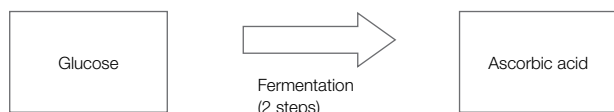
This vitamin is very soluble in water and oxidation sensitive, which explain vitamin lost in vegetables.

Vitamin C is used as additive in food as ant-oxygen agent.

The vitamin avoid the dioxygen to oxide other molecules

and avoid the food to go rancid and the food color to change.

The L ascorbic acid commercial production is done by glucose fermentation.



Toxicological data

- European recommendation advices, for vitamin C consumption, 75mg per day for woman and 90mg per day for man. For example, the average vitamin C of an orange is 56mg (40 to 80mg per 100g).
- The dose used should not exceed the quantity necessary to obtain the required effect.

Informations from Beltz H.-D., Grosch W., Schieberle P., *Food Chemistry*, 3rd Edition, Springer, 2004, 456.