



# LabCat

The international division  
of Laboratório Catarinense

where Nature and Science come together

PLANT EXTRACT

*Malpighia puniceifolia* L.



## ACEROLA

Acerola, *Malpighia puniceifolia* L. (syn. *Malpighia glabra* L. or *Malpighia emarginata* D.C.), is the fruit of the Acerola bush, a native plant of the West Indies, original from Antilhas. It has been popularly known as Barbados cherry, and stands out among other fruits for its high vitamin C content, from which it is one of the richest known sources in the world.

The vitamin C content of the fruit depends on ripeness, seasons, climates and localities. Content is highest when the fruit is still green and lowest when ripe. Recent research suggests that ascorbic acid from natural sources such as acerola is more readily absorbed by the human body than that which is synthetically produced.

Immature acerola fruits begin with a green colour and mature to a bright red colouration. As the acerola fruit matures, ascorbic acid concentration in the fruit decreases. The decrease in ascorbic acid during maturation is caused by oxidation reactions, until the point of irreversible conversion to diketogulonic acid, which has no vitamin function. This degradation requires timely processing of acerola to preserve the nutritional value.

Storage and handling conditions can measurably impact the prolonged quality of acerola fruits. Current experience in the processing of acerola fruits suggests that the vitamin C content of the fresh fruits begins to decrease as soon as 4 hours after harvest. Timely processing and/or cold storage can help limit the loss of vitamin C in harvested acerola fruits.

Recently it was demonstrated that the acerola extract can be protective against some ulcers and gastric carcinomas. It also enhances iron absorption, promotes wound and fracture healing. The acerola extract shows antioxidant activity, and therefore it may be useful in chronic diseases, such as some cancers and cardiovascular disease, characterized by oxidative damage to biological molecules. It may also be useful as an immune stimulator and modulator in some circumstances. Several studies have shown that it can significantly reduce the duration and severity of colds in some and reduce incidence in others. For nutritional purposes, mainly for children and elderly people, acerola extracts may also be added to other fruit juices in order to increase the amount of vitamin C without impairing the taste of the juices it has been added to.



### Harvesting

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

### Characteristics:

Acerola dry extract with 17% vitamin C.

### Benefits:

Source of vitamin C; antioxidant properties.  
Protection against colds/flu.  
For skin care - anti-aging.

### Applications:

Soft drinks, juices, energy drinks, candies,  
cereal bars, nutraceuticals, dairy products.

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