

# PITANGA

CERTIFIED

# FRULIX

NOW A COSMOS CERTIFIED PRODUCT

# ASSESSA

INNOVATION FOR A GREENER WORLD



## FRULIX CERTIFIED PITANGA

It's obtained through an exclusive biotechnological process that mimics the natural ripening of fruit. Using the fruits' native enzymes ASSESSA transforms it's pulp into a crystalline liquid with all the active ingredients of the fruit, in concentrations equivalent to those found in nature. FRULIX CERTIFIED PITANGA, obtained from the fresh fruit pulp, is solvent free and 100% natural.



## THE PLANT

PITANGA PULP IS RICH IN PROTEINS AND VITAMINS A, B AND C

Pitanga is the fruit of the pitanga tree, a bush of the Mirtaceae family, originally from Brazil. The pitanga is an orangey-red berry of approximately 3 cm in diameter, widely consumed in Brazil as a soft drink. The pulp of pitanga is rich in proteins, vitamins A, C and B, as well as antioxidant bioflavonoids and important minerals such as potassium, calcium, magnesium, zinc, iron and silicon. Traditionally an infusion of the pitanga tree leaves has been used to combat fevers, bronchitis, diarrhea, hypertension and menstrual colic. It is believed furthermore that the fruits have a beneficial effect against insomnia and anxiety and there are those who recommend it for the treatment of gout and rheumatism.

## COMPOSITION

The levels of proteins, minerals and vitamins can be observed in the following tables:

### PROTEINS (mg/l)

| AVERAGE | MINIMUM |
|---------|---------|
| 578,70  | 450,00  |

### MINERAL SALTS

| ELEMENT | CONC. (mg/L) |
|---------|--------------|
| Na      | 177,50       |
| K       | 760,00       |
| Ca      | 101,30       |
| Mg      | 81,60        |
| Mn      | 1,00         |
| Cu      | 0,90         |
| Zn      | 4,70         |
| Fe      | 16,40        |
| Si      | 66,40        |



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**PITANGA IS A WORD FROM THE TUPI – AN ANCIENT INDIAN LANGUAGE – WHICH MEANS ROSEY-RED**

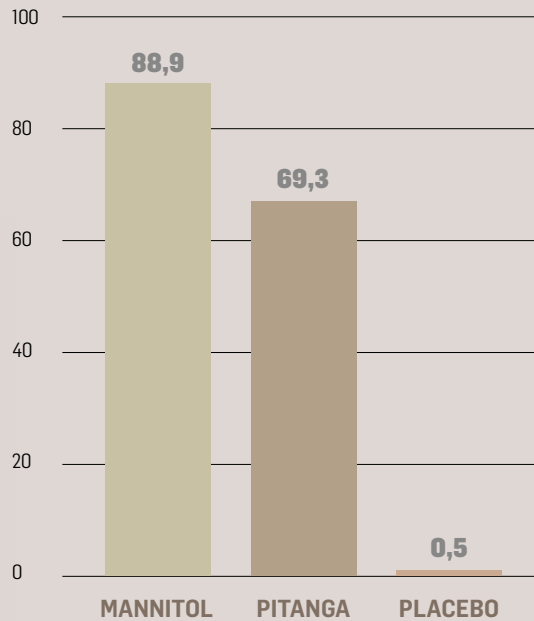
**INCI NAME**

Eugenia Uniflora Fruit Extract, Sodium Benzoate and Potassium Sorbate

## PROPERTIES ANTIOXIDANT ACTION

The test for antioxidant action was carried out in accordance with the Fenton protocol, comparing FRULIX CERTIFIED PITANGA with a saline solution (placebo) and with mannitol as a positive control. The graph below shows the antioxidant action compared to the action of the saline solution.

### INHIBITION OF DECOMPOSITION OF DEOXI-RIBOSE (FENTON)



**FRULIX CERTIFIED PITANGA shows good antioxidant activity when compared to the placebo (69.3%).**

As a **MORE CONCENTRATED** product, **FRULIX CERTIFIED PITANGA** should be used in smaller concentrations than those normally used when making formulas with conventional extracts.



## FUNCTIONS

Pitanga is a fruit rich in essential sugars, mineral salts, bioflavonoids and antioxidants. FRULIX CERTIFIED PITANGA has astringent, nutrient and protective properties and is recommended in hair-care formulas for the treatment and protection of greasy hair. The protective, stimulating and astringent properties of pitanga also mean that it is recommended for use in skin care, in products with nutritive and protective appeal.

## USAGE LEVELS

FRULIX CERTIFIED PITANGA is compatible with the majority of ingredients used in cosmetic formulations for the treatment of skin and hair and may be incorporated cold, directly into the aqueous phase of the formulas, in accordance with the suggestions of usage levels found in the table below.

| PRODUCT             | (%)        |
|---------------------|------------|
| Moisturizing cream  | 1.0 to 5.0 |
| Moisturizing lotion | 1.0 to 3.0 |
| Face mask           | 2.0 to 6.0 |
| Shampoo             | 1.0 to 3.0 |
| Conditioner         | 1.0 to 3.0 |
| Hair mask           | 1.0 to 5.0 |

FRULIX CERTIFIED PITANGA is stable at temperatures up to 90°C, in pH conditions from 4.00 to 11.00.

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