

ABACAXI PINEAPPLE

FRULIX

LIQUID FRUITS • EXCLUSIVE TECHNOLOGY



FRULIX ABACAXI (PINEAPPLE)

FRULIX ABACAXI (Pineapple) is obtained through an exclusive biotechnological process that mimics the natural ripening of the fruit. Using the fruits' native enzymes ASSESSA transforms its pulp into a crystalline liquid with all the active ingredients of the fruit, in concentrations equivalent to those found in nature.

PRODUCED WITHOUT THE ADDITION OF SOLVENTS

ASSESSA

INNOVATION FOR A GREENER WORLD



PINEAPPLE

Pineapple (Abacaxi) is a fruit native to South America, and is currently cultivated in various tropical areas of the world, including Brazil, Mexico, Cuba, Puerto Rico, South-Eastern Asia and South Africa.

The plant which produces it belongs to the Bromeliaceae family, and is a herbaceous plant with long, hard, pointed leaves with serrated edges like the teeth of a saw.

Inside the cluster of leaves grows a stem with a number of reddish flowers.

The fruit has a pyramidal shape, with colors which may vary from purple, red and green to yellowy-white, the skin being covered with scales.

Beneath the skin is a soft, white, aqueous pulp with an acrid taste. Fresh pineapple is rich in bromeline (a proteolytic enzyme) and presents appreciable levels of vitamin C, as well as thiamine, folic acid, vitamin B6 and mineral such as potassium, magnesium, calcium and manganese.



COMPOSITION

PROTEINS (mg/l)

AVG.	MINIMUM
73.00	55.00

MINERALS

ELEMENT	CONC. (mg/L)
Na	237.11
K	869.41
Ca	128.43
Mg	177.83
Mn	9.88
Cu	1.00
Zn	1.96
Fe	8.89

VITAMINS*

VITAMIN	CONC. (mg/L)
Ascorbic Acid (Vit. C)	173.20

(*) Tested after 4 months from manufacturing



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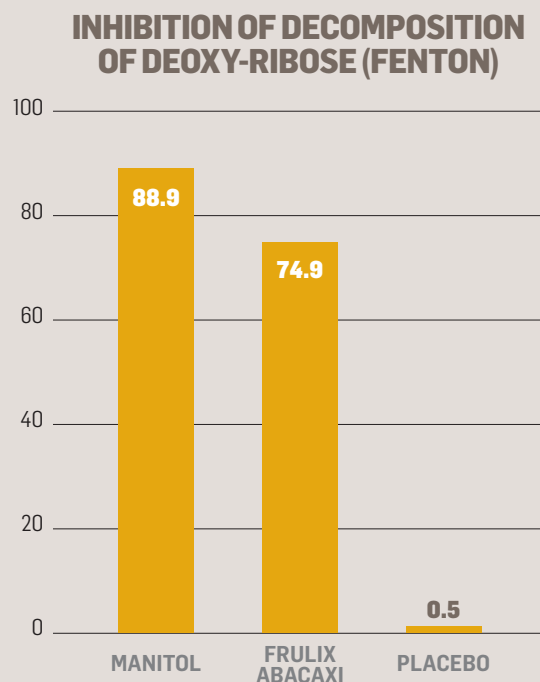
AS A HIGH CONCENTRATED PRODUCT FRULIX ABACAXI (PINEAPPLE) SHOULD BE USED IN SMALLER CONCENTRATIONS THAN THOSE NORMALLY USED WHEN MAKING FORMULAS WITH CONVENTIONAL EXTRACTS. PRODUCED WITHOUT THE ADICTION OF SOLVENTS.

INCI NAME

Ananas Sativus (Pineapple) Fruit Extract, Sodium Benzoate and Potassium Sorbate

ANTIOXIDANT ACTION

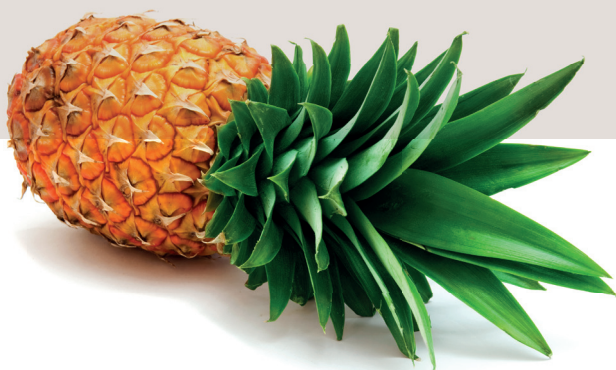
The test for antioxidant action was carried out in accordance with the Fenton protocol, comparing FRULIX ABACAXI (Pineapple) with a saline solution (placebo) and with manitol as a positive control. The graph below shows the antioxidant action compared to the action of the saline solution.



FRULIX ABACAXI (Pineapple) shows good antioxidant activity when compared to the placebo (74.9%).

FUNCTIONS

FRULIX ABACAXI (Pineapple) has astringent, nutrient and emolient properties and is recommended in hair-care products, notably in the treatment of mixed or oily or dull hair. The properties of pineapple recommend it in skin care products, especially in nutritive creams.



USAGE LEVELS

FRULIX ABACAXI (Pineapple) 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. It is stable at temperatures up to 90 °C, in pH conditions from 4.00 to 11.00.

PRODUTO	(%)
Moisturizing cream	0.3 to 0.8
Nutritive lotion	0.2 to 0.6
Calming lotion	0.2 to 0.6
Nutritive cream	0.5 to 1.0
Hair mask	0.3 to 1.0
Shampoo	0.2 to 0.4
Conditioner	0.2 to 0.4
Leave-on	0.3 to 1.0

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