

CACAU
COCOA

FRULIX

LIQUID FRUITS • EXCLUSIVE TECHNOLOGY

ASSESSA

INNOVATION FOR A GREENER WORLD



THE PLANT

CHOCOLATE AND COCOA BUTTER ARE EXTRACTED FROM FRUIT SEED

The cacao tree is native to the Amazon rain-forest and mainly originates from regions close to the sources of the Amazon and Orinoco rivers. The cacao tree has a straight trunk, measuring between 6 and 12 meters in height, with large elongated leaves, forming ribs, thick branches and covered in downy fluff. The flowers are yellow, pink or white in color and sprout from the branches and trunk forming bunches. The fruits have an oval-oblong form, and contain numerous flat seeds covered in aqueous, acid pulp. The fruits emerge along the trunk and branches and when they ripen they turn yellowish. The seeds or nuts represent the most valuable part of the fruit, since it is from them that the chocolate and fat – known as cocoa butter and used in the cosmetics and pharmaceutical industries – are obtained. Only recently, however, has the pulp come to be used as a foodstuff, due to its delicate taste and its nutritional properties. The pulp of the fruit is considered an excellent tonic, promoting the healthy functioning of the urinary apparatus, combating nephritis and heart disease.

TECHNOLOGY

FRULIX CACAU (Cocoa) 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 ADICTION OF SOLVENTS

PROTEINS (mg/l)

AVERAGE	MINIMUM
72.10	60.00

VITAMINS* (mg/l)

VITAMIN	CONTENT
Tiamina (B1)	0.42
Vitamin B6	0.12

*Analysis performed after 4 months of shelf-life



MINERAL SALTS (mg/l)

ELEMENT	CONTENT
NA	195.73
K	717.69
CA	84.82
MG	139.81
MN	0.93
CU	0.93
ZN	2.80
FE	10.25

HIGHLY CONCENTRATED, FRULIX CACAU (COCOA) IS PRODUCED WITHOUT THE ADDITION OF SOLVENTS.



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COCOA

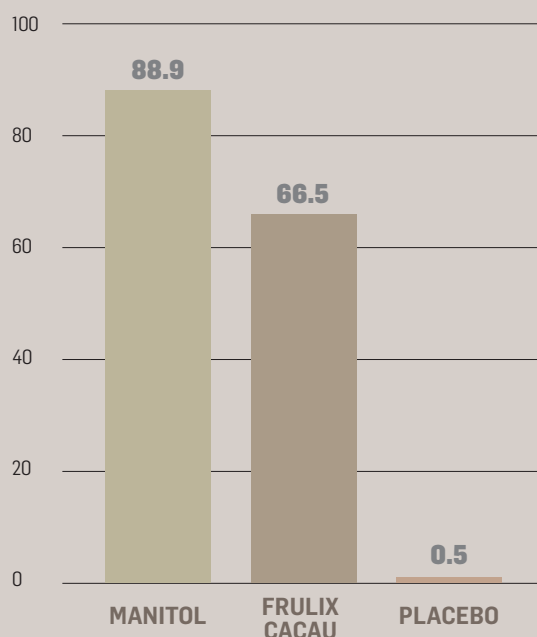
FRULIX

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ANTIOXIDANT ACTIVITY

The test for antioxidant action was carried out in accordance with the Fenton protocol, comparing FRULIX CACAU (COCOA) 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 CACAU (COCOA) shows good antioxidant activity when compared to the placebo (66.5%).

AS A VERY CONCENTRATED PRODUCT,
FRULIX CACAU (COCOA)
SHOULD BE USED IN SMALLER
CONCENTRATIONS THAN THOSE
USED WHEN MAKING FORMULAS WITH
CONVENTIONAL EXTRACTS.



FUNCTIONS

FRULIX CACAU (COCOA) boasts emollient, protective, moisturizing, nutrient and remineralizing properties of natural fruit and is recommended for hair-care products – shampoos, conditioners, facemasks, mousses – in formulas for treatment of dry, dyed and weakened hair where nutrition, protection and moisturizing are necessary.

USAGE LEVELS

FRULIX CACAU (COCOA) 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	0.3 to 0.8
Moisturizing lotion	0.2 to 0.6
Calming lotion	0.2 to 0.6
Nutritive cream	0.5 to 1.0
Shampoo	0.2 to 0.4
Conditioner	0.2 to 0.4
Combing cream	0.3 to 1.0
Treatment mask	0.8 to 1.5

FRULIX CACAU (COCOA) is stable at temperatures up to 90°C, in pH from 4 to 11.

FRULIX CACAU (COCOA) is recommended for hair submitted to chemical treatments. Due to its hydrating, antioxidant and dermoprotective properties, FRULIX CACAU (Cocoa) is also recommended for skin-care products.

INCI NAME

Theobroma Cacao (cocoa) Extract, Sodium Benzoate and Potassium Sorbate

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