



## Product Description

# Aloesol™



## INTRODUCTION

Aloe vera is been extensively used in the food supplement sector and lately is waking up interest in the functional foods field.

Comparing the physic-chemical characteristics of fresh aloe vera juice with some of the fruits of the market, it can be appreciated that aloe vera juice has a content of vitamins and minerals, along with a low sugar content, which makes it an excellent source of health. In addition, aloe contains some specific and healthy polysaccharides, the acemannans, not present in other fruit juices (Table 1).

All these nutritional characteristics allow the use of aloe vera as a raw material for the elaboration of functional foods.

Although the main form of intake of aloe is as a natural juice, it can also be used as a lyophilized dry extract in powder formulations.

Last years, the aloe vera market has experienced a strong boom but, unfortunately, not all products that declare they contain aloe have the quality and composition they announce in their labelling.

## ALOESOL™: ALOE OF TOP QUALITY

### CERTIFICATION

Solchem Nature deals a fresh juice of aloe vera under the brand **Aloesol™** that has its origin in organic crops located in Malaga, Southern of Spain. This means that **Aloesol™** is organic certified.

Physico-chemical characteristics	Fresh aloe vera juice <b>Aloesol™</b>	Orange juice	Kiwi	Mango
Water %	89,92	88,3	83,1	81,7
Proteins%	8,34	0,7	1,1	0,5
Lipids%	1,5	0,2	0,5	0,3
H. Carbon%	0,2	10,4	14,7	17
Caloric value (kcal / 100g)	48	45	61	65
Vitamins	A, B2, B6, C, D, E	A, C, E, K, B1, B3, B9, B5, Colina	A, C, E, K, B3, B6, B5, B9, Colina	A, C, E, K
Malic acid mg / 100 g	142	-	-	-
Citric acid mg / 100 g	97	-	-	-
Calcium mg / 100 g	32,3	11	34	10
Magnesium mg / 100 g	11,2	11	17	9
Fluorine mg / 100 g	0,1	-	-	-
Iron mg / 100 g	0,08	0,2	0,3	0,1
Potassium mg / 100 g	6,9	200	312	156
Manganese mg / 100 g	4,4	0	0,1	0
Sodium mg / 100 g	14,1	1	3	2
Phosphorus mg / 100 g	6,7	17	34	11
Germanium (ppb)	4,5	-	-	-
Total sugars mg / 100 g	> 400	8400	9000	14800
Acemannans mg / g	40	-	-	-
Color	Bright crystal juice.	Orange.	Green.	Mate orange.
Odor	Natural. Typical aloe due to absence of aloins.	Acido. Typical orange.	Acid. Typical kiwi.	Aromatic, tropical.
Flavor	Natural. Not bitter.	Acid, sweet both.	Acid.	Sweet. Typical mango.

**Tabla 1.** Physico-chemical characteristics of fresh **Aloesol™** aloe vera juice, and its comparison with orange, kiwi and mango juice.

## EXTRACTION

Firstly, aloe leaf bark is carefully removed avoiding contamination with aloin, the anthraquinone that is only found in aloe cortex, to obtain the fresh inner parenchyma or leaf pulp, which allows preparing **Aloesol™** fresh juice.

Secondly, the pulp is crushed and filtered (just in case the customer wants a low fibre content), to obtain the fresh juice to which the manufacturer performs the corresponding quality and control tests.

## QUALITY

As pointed out, not all products sold as aloe juice contain 100% aloe. In order to compare the quality and aloe content of **Aloesol™** with various marketed aloe juices, it was used a rapid analytical method.

Figure 1 shows a comparative among 9 different aloe vera juices sold in the market and **Aloesol™**. The analysis performed were related to their physical, chemical and nutritional properties.

The analysed parameters were:

- Content in total polysaccharides.
- Content in specific polysaccharides of aloe vera (acemannans).
- °Brix
- pH
- Conductivity

## RESULTS AND COMMENTS

The results of this comparative study showed that there was a great variability in the real content of aloe vera polysaccharides among the existing juices in the market.

The relationship between Brix and aloe polysaccharide values are a tool that indicates possible adulteration in commercial juices (Figure 1).

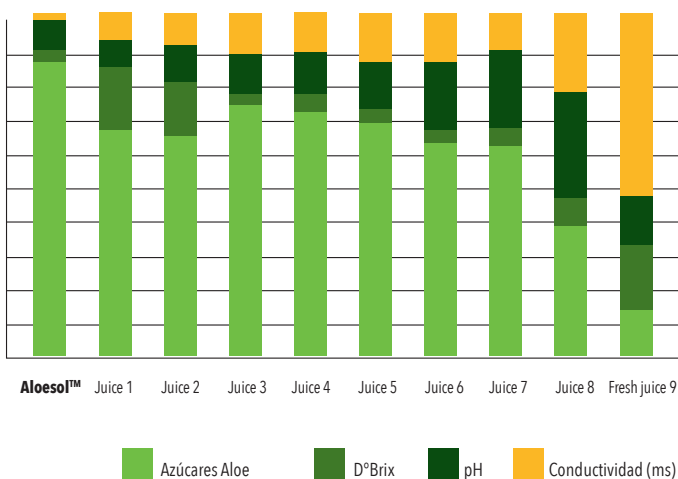
From the results, it can be stated that **Aloesol™** is an aloe vera juice with a high content of aloe specific polysaccharides and a low content of simple sugars, unlike other juices offered as 100% aloe vera but with a high content in simple sugars that makes serious doubts about their purity.

## CONCLUSIONS

When comparing the quality of **Aloesol™** with other aloe brands using a quick, reproducible and simple method, the results showed that:

- There is a great variability in the content of aloe vera in the different aloe brands.
- Some aloe juice contains added sugars, which means adulteration of the product.
- Not all juices have been prepared from fresh juice, but may have been prepared from lyophilized and reconstituted aloe powder.
- Due to the physic-chemical characteristics **Aloesol™** presents, as well as its high content in acemannans, **Aloesol™** can be considered as a juice of aloe vera of maximum quality.

**Aloe vera drinkable juices**



**Figure 1.** Conductivity, pH, ° Brix and aloe sugars in 9 commercial juices of aloe vera versus **Aloesol™**.



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