

# PRODUCT SPECIFICATION

DATE OF ISSUE  
08-08-2023

## MALIC ACID (E296)




NATUURLIJK NATUURLIJK PRODUCT CODE:  
X1615, X1616, X1617, X1618

PRODUCTION:  
28282803

**NATUURLIJK**  
**NATUURLIJK**  
*special food ingredients*

## 1. PRODUCT IDENTIFICATION

### 1.1 Supplier product information

<b>Product name</b>	Malic acid		
<b>Production</b>	28282803		
<b>Product code</b>	<b>Content</b>	<b>EAN</b>	<b>Packaging</b>
X1615	75g	8718309831455	Plastic jar and screw lock cap with warranty seal. Jar =  Cap = 
X1616	175g	8718309831462	
X1617	750g	8718309831479	
X1618	10kg	8718309831486	Blue bag =  in box

### 1.2 Scientific product information

#### Single ingredient

Main use	Food acid
Chemical name	DL Malic Acid
Chemical formula	C <sub>4</sub> H <sub>6</sub> O <sub>5</sub>
Production method	Chemical synthesis

### 1.3 Legislative product information

CAS number	617-48-1		
EU food additive	E296		
Country of Origin	Canada		
Organic products	For the purposes of Article 19(2)(b) of Regulation (EC) No 834/2007, malic acid may be used in the manufacture of processed organic foods.		

## 2. PRODUCT INFORMATION

### 2.1 Physical and Chemical properties

	Unit	Specification	Method
Appearance		fine powder	
Colour		White to nearly white	
Odour/taste		Odourless	
Purity	%	99,48	FCC 11
Assay	wt%	99,7	
Water	wt%	0,13	

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Molecular weight	g/mole	134,0874	
Specific rotation	°	-0.10 - +0.10	
Boiling point	°C	150	
Melting range	°C	127-132	
Flash point	°C	203	
pH		~2.3	10 g/L Water
Particle size	25 mesh - 710µm	0,0%	
	100 mesh - 150 µm	0,5%	

## 2.2 Microbiological data

Total plate count	cfu/g	max. 10	
Moulds	cfu/g	max. 10	
Yeasts	cfu/g	max. 10	
E Coli	cfu/g	absent	
Salmonella spp.	cfu/25g	absent	
Coliforms	cfu/g	absent	

## 2.3 Chemical analyses

Maleic acid	%	≤ 0,05	
Fumaric acid	%	≤ 1,0	
Arsenic (As)	mg/kg	≤ 3	
Chloride (Cl)	mg/kg	max. 40	
Mercury (Hg)	mg/kg	≤ 1	
Lead (Pb)	mg/kg	≤ 2	

## 2.4 Nutritional Information

### 2.4.1 Nutritional Values

Energy	kJ/100g	1300	
Energy	kcal/100g	300	
Protein	g/100g	0	
Carbohydrate:	g/100g	0	
Of which Sugars	g/100g	0	
Polyols	g/100g	0	
Starches	g/100g	0	

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Others	g/100g	0	
Fat:	g/100g	0	
Of which Saturated	g/100g	0	
Mono-unsaturated	g/100g	0	
Poly-unsaturated	g/100g	0	
Transfatty acids	g/100g	0	
Cholesterol	mg/100g	0	
Water	g/100g	0,3	
Organic acid	g/100g	99,9	
Dietary fiber	g/100g	0	

### 2.4.2 Minerals

Sodium (Na)	mg/100g	50	
Calcium (Ca)	mg/100g	0,2	
Iron (Fe)	mg/100g	0,1	
Ash (Minerals)	mg/100g	100	

## 3. FOOD INTOLERANCE

### 3.1 Allergens

Yes = ✓ / No = ✗	Contains	Direct Contamination	Cross-Contamination (Risk)
Barley	✗	✗	✗
Beef	✗	✗	✗
Cacao	✗	✗	✗
Carrot	✗	✗	✗
Celery and celery products	✗	✗	✗
Cereals containing gluten and products produced with these (wheat, rye, oats, spelt, barley)	✗	✗	✗
Chicken	✗	✗	✗
Coriander	✗	✗	✗
Crustaceans and Shellfish	✗	✗	✗
Eggs and egg products	✗	✗	✗

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Fish and fish products	X	X	X
Glutamate	X	X	X
Lupin and products thereof	X	X	X
Milk and milk products (including Lactose)	X	X	X
Molluscs and products thereof	X	X	X
Mustard and mustard products	X	X	X
Nuts and nut products (almonds, hazelnuts, walnuts)	X	X	X
Peanuts and peanut products	X	X	X
Pork	X	X	X
Sesame and sesame products	X	X	X
Soybean and soybean products	X	X	X
Sulphite (E221 - E228)	X	X	X
Sulphur dioxide (>10mg/kg)	X	X	X

### 3.2 Suitability for other diets:

Coeliacs	✓	Lactose intolerant	✓
Halal	✓	Vegans	✓
Kosher	✓	Vegetarian	✓

### 3.3 GMO Declaration:

Malic Acid does not contain genetically modified organisms and is not produced using raw materials of a genetically modified origin. At no stage during production does the product come into contact with genetically modified organisms.

### 3.4 Irradiation:

Malic Acid is not treated with ionizing radiation .

### 3.5 BSE/TSE declaration:

The used ingredients for Malic Acid are not of animal origin. The processing equipment and the packing material which is used to manufacture, pack or fill the products into the packing units do not come into contact with any meat or meat-by product.

### 3.6 Residual Solvents:

For the manufacturing of Malic Acid, no solvents are used.

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## 4. STORAGE CONDITIONS

Storage conditions	In closed original packaging. Must be kept cool and dry in a well-ventilated place.
Shelf life	24 months after production, under the above mentioned conditions.

## 5. FOOD SAFETY

### 5.1 Hygiene:

This product is produced in a facility with an on HACCP based food safety system.

### 5.2 Identifications of dangers:


**Classification of the substance**  
(Regulation (EC) No 1272/2008) | Eye Irrit. 2; Causes serious eye irritation.

### 5.3 Labeling, directions for use:

#### 5.3.1 Disclaimer:

These labeling directions are not required for packaging with a content of 125ml or less.

#### 5.3.2 Hazards identification:

Hazard pictogram	
Signal Word	Warning
Hazard Statements	H319: Causes serious eye irritation.

#### 5.3.3 Safety Recommendation:

Prevention	P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical advice/attention.
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## 6. EXTENDED PRODUCT INFORMATION

### 6.1 Usage

Malic acid is used to provide acidity to food products. And to a much lesser extent to chelate metal ions, from hard water or in wine.

Malic acid tastes less sharply acid than citric acid and is used to provide an acid taste that is less immediate but persists longer. It is used alone or in combination with other acids to give a range of acid impacts. It is particularly useful in product formulations that use intense sweeteners.

It has a lower melting point than citric acid, which is beneficial in the manufacture of boiled sweets.

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## 6.2 Dictionary

NL	The Netherlands	Appelzuur
GB	Great Britain (UK)	Malic acid, DL Malic acid, Hydroxysuccinic Acid
DE	Germany	Äpfelsäure, Apfelsäure
FR	France	Acide malique
ES	Spain	Ácido málico
PT	Portugal	Ácido málico
IT	Italy	Acido malico
DK	Denmark	Malinsyre, Æblesyre
NO	Norway	Eplesyre
SE	Sweden	Äppelsyra
FI	Finland	Omenahappo
IS	Iceland	Mikilli eplasýru
CZ	Czech Republic	Kyselina jablečná
SK	Slovak Republic	Kyselina jablčná
HU	Hungary	Almasav
HR	Croatia (Hrvatska)	Jabučna kiselina
GR	Greece	Μηλικό οξύ
SI	Slovenia	Mlečna kislina
PL	Poland	Kwas jabłkowy, Acidum malicum
RO	Romania	Acidul malic
BG	Bulgaria	Ябълчена киселина
RU	Russian Federation	Яблочная кислота
TR	Turkey	Malik asit

## 7. DISCLAIMER

Although we take great care in setting up this product specification, we cannot accept any liability for the completeness and fully accurateness of the information provided. The content of this Product Specification is completed to the best of our knowledge.

This document does not dismiss the user of his legal obligations with respect to food safety.

This product specification replaces any previously issued specifications.