



ALVINESA ALCOHOLERA VINÍCOLA S.A
POLÍGONO INDUSTRIAL "EL CAMPILLO", CM-4117, Km 4,8
13250 DAIMIEL (Ciudad Real) ESPAÑA
Tfno: 926 26 06 70; e-mail: alvinesa@alvinesa.com

Date and review

Abril 2017. Rev.7

DATA SHEET: NATURAL L(+)-TARTARIC ACID – E334

DESCRIPTION

- Natural Tartaric Acid is a pure chemical product obtained by extraction from wine products and used as food additive.
- Appearance and organoleptic characteristics: colourless monoclinic crystals or white powder, odourless and agreeable sour taste.
- Chemical name: (2R,3R)-2,3-dihydroxybutane-1,4-dioic acid
- Specific formula: $C_4H_6O_6$
- EC Nº: E334
- CAS Nº: 87-69-4
- EINECS Nº: 201-766-0.
- High stability to air and light. Hygroscopic to a relative moisture up to 75%.

PHYSICAL AND CHEMICAL PROPERTIES

PARAMETER	UNIT	VALUE
Molecular weight	g/mol	150,09
Melting point	°C	168 - 170
Decomposition temperature	°C	> 220
Density	g/ml	0,85-1,10
Appearance (standard conditions)		White solid
Odour		Odourless
pH in solution at 1%		2,1
Specific rotation (solution at 20%)		+12,0 : +12,8
Solubility in water (22°C)	g/L	1390
Dissociation constants		$K_1 = 1,04 \times 10^{-3}$: $K_2 = 4,55 \times 10^{-5}$

CHEMICAL SPECIFICATION

PARAMETER	UNIT	INTERVAL OR THRESHOLD	REFERENCE PHARMACOPOEIA	Maximum value accepted	
Pureness	% m/m	99,7 < x < 101,0	Ph. Eur. VIII	99,5-101,0	
Weight losses after drying	% m/m	< 0,20	Ph. Eur. VIII	< 0,20	
Ignition residue (sulphated ashes)	% m/m	< 0,05	Ph. Eur. VIII	< 0,10	
Chemical composition	Sulphates	ppm	< 150	Ph. Eur. VIII	< 150
	Chlorides	ppm	< 30	Ph. Eur. VIII	< 100
	Iron	ppm	< 10	O.C.	< 10
	Lead	ppm	< 2	F.C.C. IX	< 2
	Mercury	ppm	< 1	R.U.E. 231/2012	< 1
	Heavy metals	ppm (Pb)	< 10	Ph. Eur. VIII	< 10
	Arsenic	ppm	< 1	F.C.C. IX	< 3
	Oxalate	ppm	< 100	R.U.E. 231/2012	< 100
Calcium	ppm	< 100	Ph. Eur. VIII	< 200	

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PACKAGING AND STORAGE CONDITIONS

- The product in Alvinesa facilities is stored in such conditions to meet the requirements of the norms currently established.
- 25 Kg paper sacks with a polythene thermoseal inner bag for food industry, arranged in 1000 kg and 1200kg shrink wrapped pallets.
- 1000 Kg polypropylene raffia sacks for food industry.
- Keep the product in the original package in a dry and well-ventilated place, avoiding extreme temperatures and keep away from the direct sunlight.
- Tartaric acid is chemically stable, although it is recommended a good rotation in the stores, avoiding to stack the pallets up and reducing the storage time below 12 months to prevent the product becomes compacted.
- The shelf-life of the product according the labelling is 5 years.

COMPLIANCE

- American Pharmacopoeia (U.S.P. XXXVIII – N.F. 33)
- British Pharmacopoeia (B.P)
- European Pharmacopoeia (Ph.Eur. VIII)
- Food Chemical Codex (F.C.C. IX)
- Commission Regulation (EU) No 231/2012 of 9 March 2012 laying down specifications for food additives listed in Annexes II and III to Regulation (EC) No 1333/2008 of the European Parliament and of the Council
- International Oenological Codex (O.C.)

WINE ORIGIN

The **L (+) Tartaric Acid Natural** produced by ALVINESA **complies with the European Commission Regulation (EU) No 2244/2202, stating under Article 1:**

The Tartaric Acid is provided for an Annex IV (1) (l) and (m) and Annex IV(3)(k) and (l) to Regulation (EC) No 1493/1999, also called L-Tartaric Acid, must be of agricultural origin and extracted specifically from wine products. It must also comply with the purity criteria laid down in Commission Directive 96/77/EC.



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ALLERGENIC SUBSTANCES

The **L (+) Tartaric Acid Natural** produced by ALVINESA does not contain any of the following Allergens and/or Allergenic substances:

1. Cereals containing Gluten or product of these.
2. Crustacea or product of these.
3. Eggs or eggs products.
4. Fish or fish products.
5. Peanuts or products of these.
6. Glutamate (E620-E625J).
7. Soya beans or products of these.
8. Milk or milk products.
9. Nuts (Other than peanuts) or products of these.
10. Lactose.
11. Sulphite [E220-E227] in concentration of min. 10 mg/kg.
12. Sesame seeds or products of these.
13. Peas or products of these.
14. Swine or products of these.
15. Poppy, sunflower seeds or products of these.
16. Purine or purine products.
17. Leguminous (other than peas) or products of these.
18. Chicken or chicken products.
19. Royal jelly or bee pollen or propolis.
20. Preservatives like: BHA [E320], BHT [E321], Benzoic Acid [E210] and Salt of Benzoic [E211-E213], Parabene [E214-E219], Sorbic Acid [E200] and Salt of Sorbic [E202-E203], Azo dye [E102 and foll], Gallats [E310-E312], Citric Acid [E330] and Citric Salt [E331-E332-E333].


GENETIC MODIFIED ORGANISMS

The **L (+) Tartaric Acid Natural** produced by ALVINESA is obtained or manufactured, directly or indirectly, **without the aid of genetic modification techniques** as defined in EEC Directive 2001/18/EEC (Dated 2001, March 12th and published on 2002, October 17th, No L106).

This definition states that techniques of genetic modification are:

1. Recombinant DNA techniques using vector systems as previously covered by Council Regulation 82/472/EEC (dated 1982, June 30th and published on 1982, July 21th, No L-213, 15/16).
2. Techniques involving the direct introduction into an organism or heritable material prepared outside the organism including micro-injection, macro-injection and micro-encapsulation.
3. Cell fusion (including protoplast fusion) or hybridization techniques where live cells with new combinations of heritable genetic material are formed through the fusion of two or more cells by means of methods that do not occur naturally.

We also state, with reference to EEC Regulations No. 1829/2003 and 1830/2003, that these regulations are not applicable to the **L (+) Natural Tartaric Acid** because is "**non-GMO product**".

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IONIZATION RADIATION

The **L (+) Tartaric Acid Natural** produced by ALVINESA was not subject to ionizing radiation.

NANOPARTICLES

The **L (+) Tartaric Acid Natural** produced by ALVINESA does not contain nanoparticles and has not been produced with nanoparticles.

PESTICIDES

The **L (+) Tartaric Acid Natural** produced by ALVINESA has not any residue of pesticides.

The methodology and working conditions of users of this product are outside the knowledge and control of ALVINESA, always being the ultimate responsibility of the user to take the necessary measures to comply with the legislative requirements regarding handling, storage, use and disposal.