## TECHNICAL DATA SHEET

Product: $\quad$ NATURAL L(+) TARTARIC ACID
Revision Date: 13/04/2011 rev. 8

## DESCRIPTION

$\mathrm{C}_{4} \mathrm{H}_{6} \mathrm{O}_{6}$

(2R,3R)-2,3-dihydroxybutane-1,4-dioic Acid
Molecular Weight= 150,09
EC-No. E334
CAS-No. 87-69-4
EINECS-No. 201-766-0
Tartaric Acid appears as colourless crystals or white powder, almost odourless, of strongly acid taste, stable in air and hygroscopic at relative humidity higher than $75 \%$.
Widely spread in nature, it is present in many fruits, free or combined with potassium, calcium or magnesium. The raw material for the production of Natural Tartaric Acid is Calcium Tartrate, which is obtained from distilled wine lees.
The WHO/FAO, thru the Joint Expert Committee on Food Additives (JECFA 1977-1983-1990) approved its ADI (Acceptable Daily Intake) of $30 \mathrm{mg} / \mathrm{kg}$ of body weight for $\mathrm{L}(+)$ Tartaric Acid, while the D and DL forms of synthetic and unnatural origin were forbidden.
Our quality system for the control of production process and finished product grants the compliance of our Tartaric Acid to the national and international requirements of HACCP. The shelf-life of the product, mentioned on our labels, is 5 years.
SINCE TARTARIC ACID L(+) E334 IS A HYGROSCOPIC PRODUCT (THAT'S THE REASON WHY IT CAKES VERY QUICKLY) WE SUGGEST TO USE THE ABOVE PRODUCT WITHIN 6 (SIX) MONTHS.

## COMPLIANCE

Our Tartaric Acid is complying with all the requirements of the following pharmacopoeias:

| Ph.EUR. - European Pharmacopoeia | REG. 2008/84/EC |
| :--- | :--- |
| U.S.P. - United States Pharmacopoeia | F.C.C. - Food Chemical Codex |
| F.U. - Farmacopea Ufficiale | J.P. - Japanese Pharmacopoeia |
| N.F. - National Formulary |  |

## PHYSICAL, CHEMICAL AND NUTRITIONAL PROPERTIES

| Solubility: in water | $139 \mathrm{~g} / 100 \mathrm{ml}$ at $20^{\circ} \mathrm{C}$ | Specific weight: real | $1,7598 \mathrm{~g} / \mathrm{ml}$ |
| :---: | :---: | :---: | :--- | :--- |
|  | $147 \mathrm{~g} / 100 \mathrm{ml}$ at $25^{\circ} \mathrm{C}$ | apparent from | 0,8 to $1,1 \mathrm{~g} / \mathrm{ml}$ |
| in alcohol $33 \mathrm{~g} / 100 \mathrm{ml}$ at $25^{\circ} \mathrm{C}$ | Melting point: from | 168 to $1700^{\circ} \mathrm{C}$ |  |
| in ether $0,4 \mathrm{~g} / 100 \mathrm{ml}$ at $25^{\circ} \mathrm{C}$ | pH (Solution $0,1 \mathrm{~N}$ ): | 2,2 |  |

## MAIN CHEMICAL SPECIFICATIONS

| Assay: | da 99,7 a 100,5\% |  | Calcium: | 25 | ppm max |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Specific Rotation (20\% w/v): | da + | 12,0 a 12,8 ${ }^{\circ}$ | Heavy Metals (as Pb): | 2 | ppm max |
| Oxalates: | 50 | ppm max | Loss on drying: | 0,2 | \% max |
| Chlorides: | 20 | ppm max | Sulphated Ash: | 0,05 | \% max |
| Sulphates: | 150 | ppm max | Iron: | 3 | ppm max |
| Lead: | 0,05 | ppm max | Arsenic: | 0,05 | ppm max |
| Mercury: | 0,05 | ppm max |  |  |  |

