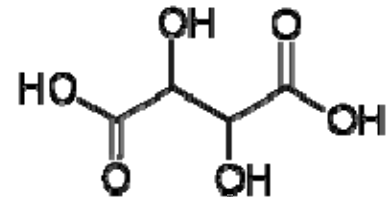


LIQUID TARTARIC ACID

Liquid Tartaric Acid is a clear, colorless liquid, made with Tartaric Acid. Tartaric acid is a white crystalline diprotic organic acid. It occurs naturally in many plants, particularly grapes, bananas, and tamarinds, and is one of the main acids found in wine. It is added to other foods to give a sour taste, and is used as an antioxidant. Salts of tartaric acid are known as tartrates. It is a dihydroxyl derivative of succinic acid. Tartaric acid was first isolated from potassium tartrate, known to the ancients as tartar, c. 800 by the alchemist Jabir ibn Hayyan. The modern process was developed in 1769 by the Swedish chemist Carl Wilhelm Scheele. Tartaric acid played an important role in the discovery of chemical chirality. This property of tartaric acid was first observed in 1832 by Jean Baptiste Biot, who observed its ability to rotate polarized light. Louis Pasteur continued this research in 1847 by investigating the shapes of ammonium sodium tartrate crystals, which he found to be asymmetric. By manually sorting the different "handed" crystals under magnification, Pasteur was the first to produce a pure sample of levotartaric acid. Tartaric acid may be most immediately recognizable to wine drinkers as the source of "wine diamonds", the small potassium bitartrate crystals that sometimes form spontaneously on the cork. These "tartrates" are harmless, despite sometimes being mistaken for broken glass, and are prevented in many wines through cold stabilization. The tartrates that remain on the inside of aging barrels were at one time a major industrial source of potassium bitartrate. However, tartaric acid plays an important role chemically, lowering the pH of fermenting "must" to a level where many undesirable spoilage bacteria cannot live, and acting as a preservative after fermentation. In the mouth, tartaric acid provides some of the tartness in the wine, although citric and malic acids also play a role.



Item	Test	Standard	Reference
A	Appearance	Clear Solution	PH. EUR. VI
B	Assay	49.85% to 50.25% in weight	USP XXXII
D	Specific Optical Rotation	12.0 – 12.8	PH. EUR. VI
E	Identification	Passes Test	PH. EUR. VI
F	Sulphates	150 ppm max	PH. EUR. VI
G	Chlorides	100 ppm max	PH. EUR. VI
H	Oxalate	100 ppm max	DIR. 2008/84/CE
I	Heavy Metals (As Pb)	<10 ppm	PH. EUR. VI
J	Iron	5 ppm max	Manufacturer
K	Calcium	<200 ppm	PH. EUR. VI
L	Lead	<2ppm	FCC VI
M	Arsenic	<1ppm	JP XV
N	Cadmium	<1ppm	Manufacturer
O	Mercury	<1ppm	DIR. 2008/84/CE
P	Residual Solvents	Total absence in the manufacturing process	USP XXXII

PACKAGING:

Liquid Tartaric is available in 0.5 or 1 gallon HDPE bottles, 5 gallons pails, 55 gallons poly drums with the option of the dripless liquid dispensing system, 330 gallons tote bins or 5,000 gallons truckloads quantities, to satisfy the needs of users of all sizes.

STORAGE:

Avoid temperature conditions below 35 degrees Fahrenheit (2 degrees Celsius) and above 100 degrees Fahrenheit (38 degrees Celsius) and environments with the presence of strong odors.

SHELF LIFE:

Five years from manufacturing date.