

ORYZA OIL & FAT CHEMICAL CO., LTD.

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PRODUCT STANDARD

PRODUCT NAME : ALPHA LIPOIC ACID-P80 (FOOD)

This product guarantees a minimum of 80.0 % α -lipoic acid (thioctic acid, 1,2-dithiolane-3-pentanoic acid).

<u>Appearance</u>	Slight yellowish or yellowish powder.	
Certification Test	It has no smell or slightly unique smell. The maximum absorbance wave length : 331 - 335 nm.	
<u>certification</u> rest		bance wave length : 278 - 283 nm.
<u>α-Lipoic Acid</u>	Min. 80.0 %	(HPLC)
Loss on Drying	Max. 0.5 %	(Analysis for Hygienic Chemists,
<u>Loss on Drymg</u>		1g, 40°C, reduced pressure, P_2O_5 , 4 h)
Ignition Residue	Max. 0.1 %	(The Japanese Standards for Food Additives)
Purity Test	Max. 0.1 /0	(The supulese standards for food fidentives)
(1)6,8-Epitrithiooctanoic acid	Max. 0.1 %	(HPLC)
(2)Heavy Metals (as Pb)	Max. 10 ppm	(Sodium Sulfide Colorimetric Method)
(3)Arsenic (as As_2O_3)	Max. 10 ppm Max. 1 ppm	(Standard Methods of Analysis in Food
(5) Alseline $(as As_2O_3)$	Max. 1 ppm	Safety Regulation, The Third Method,
		Apparatus B)
Standard Plate Counts	Max. 1×10^3 cfu/g	(Analysis for Hygienic Chemists)
Moulds and Yeasts	Max. $1 \times 10^{\circ}$ cfu/g Max. 1×10^{2} cfu/g	(Analysis for Hygienic Chemists)
Coliforms	Negative	(Analysis for Hygienic Chemists)
Residual Solvents	Negative	(Analysis for Hygienie Chemists)
(1)Ethanol	Max. 0.1 %	(GC)
(2)Other Solvents	WIAX. 0.1 /0	(66)
Acetone	Not detected (Less	than 1 ppm) (GCMS)
Cyclohexane	Not detected (Less	than 1 ppm) (GCMS)
Dichloromethane		than 1 ppm) (GCMS)
Ethyl acetate		than 1 ppm) (GCMS)
Hexane		than 1 ppm) (GCMS)
MTBE		than 1 ppm) (GCMS)
Toluene	Not detected (Less	than 1 ppm) (GCMS)
Composition	Ingredient	Content (Values are just a guide)
Composition	Thioctic Acid	<u>80 %</u>
	Vegetable Oils & F	
	Total	$\frac{100\%}{100\%}$
	Total	100 %
Expiry date	2 years from date of manufacturing.	
Storage	Store it in a cool, dry, ventilated area with desiccant. Keep it away from high temperature and sunlight, and store it in a closed container.	
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	Γ	Established Date March 23, 2005

Revised Date Specification No. May 10, 2024

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