



ORYZA OIL & FAT CHEMICAL CO.,LTD.

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PRODUCT STANDARD

PRODUCT NAME : **ALPHA LIPOIC ACID-WSP7** (FOOD)

This product guarantees a minimum of 7.0 % α -lipoic acid (thioctic acid, 1,2-dithiolane-3-pentanoic acid). This product is water-soluble.

<u>Appearance</u>	Slight yellowish or yellowish powder. It has no smell or slightly unique smell.	
<u>Certification Test</u>	The maximum absorbance wave length : 331 - 335 nm. The minimum absorbance wave length : 278 - 283 nm.	
<u>α-Lipoic Acid</u>	Min. 7.0 %	(HPLC)
<u>Loss on Drying</u>	Max. 9.0 %	(Analysis for Hygienic Chemists, 1g, 40°C, reduced pressure, P ₂ O ₅ , 4 h)
<u>Ignition Residue</u>	Max. 0.10 %	(The Japanese Standards for Food Additives)
<u>Purity Test</u>		
(1)Heavy Metals (as Pb)	Max. 10 ppm	(Sodium Sulfide Colorimetric Method)
(2)Arsenic (as As ₂ O ₃)	Max. 1 ppm	(Standard Methods of Analysis in Food Safety Regulation, The Third Method, Apparatus B)
<u>Standard Plate Counts</u>	Max. 1×10 ³ cfu/g	(Analysis for Hygienic Chemists)
<u>Moulds and Yeasts</u>	Max. 1×10 ² cfu/g	(Analysis for Hygienic Chemists)
<u>Coliforms</u>	Negative	(Analysis for Hygienic Chemists)
<u>Residual Solvents</u>		
(1)Ethanol	Max. 0.1 %	(GC)
(2)Other Solvents		
Acetone	Not detected (Less than 1 ppm)	(GCMS)
Cyclohexane	Not detected (Less than 1 ppm)	(GCMS)
Dichloromethane	Not detected (Less than 1 ppm)	(GCMS)
Ethyl acetate	Not detected (Less than 1 ppm)	(GCMS)
Hexane	Not detected (Less than 1 ppm)	(GCMS)
MTBE	Not detected (Less than 1 ppm)	(GCMS)
Toluene	Not detected (Less than 1 ppm)	(GCMS)

<u>Composition</u>	<table><thead><tr><th>Ingredient</th><th>Content</th></tr></thead><tbody><tr><td>Cyclodextrin</td><td>93 %</td></tr><tr><td>Thioctic Acid</td><td>7 %</td></tr><tr><td>Total</td><td>100 %</td></tr></tbody></table>	Ingredient	Content	Cyclodextrin	93 %	Thioctic Acid	7 %	Total	100 %	(Values are just a guide)
Ingredient	Content									
Cyclodextrin	93 %									
Thioctic Acid	7 %									
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.

Established Date	February 21, 2019
Revised Date	May 10, 2024
Specification No.	T-410EN