



## ORYZA OIL & FAT CHEMICAL CO.,LTD.

1 Aza Numata Kitagata Kitagata-cho Ichinomiya-city, Aichi-prefecture 493-8001 JAPAN

Phone:+81-586-86-5141 Facsimile:+81-586-86-6191

URL/http://www.oryza.co.jp/ E-mail:info@oryza.co.jp

### PRODUCT STANDARD

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

This product guarantees a minimum of 98.0 %  $\alpha$ -lipoic acid (thioctic acid, 1,2-dithiolane-6-pentanoic acid).

**Appearance**

Light yellowish or yellowish crystalline powder. It has no smell or lightly unique smell. Soluble in chloroform and ethanol. Slightly soluble in water.

**Certification Test**

The maximum absorbance wave length : 331 ~ 335 nm.  
The minimum absorbance wave length : 278 ~ 283 nm.

**$\alpha$ -Lipoic Acid**

Min. 98.0 % (HPLC)

**Melting Point**

60 ~ 63°C (The Japanese Standards for Food Additives)

**Loss on Drying**

Max. 0.5 % (Analysis for Hygienic Chemists, 1g, 40°C, reduced pressure, P<sub>2</sub>O<sub>5</sub>, 4 h)

**Ignition Residue**

Max. 0.1 % (The Japanese Standards for Food Additives)

**Purity Test**

**(1)6,8-Epitrithiooctanoic acid**

Max. 0.1 % (HPLC)

**(2)Polymer**

Max. 2.0 % (Precipitation Method)

**(3)Heavy Metals (as Pb)**

Max. 10 ppm (Sodium Sulfide Colorimetric Method)

**(4)Arsenic (as As<sub>2</sub>O<sub>3</sub>)**

Max. 1 ppm (Standard Methods of Analysis in Food Safety Regulation, The Third Method, Apparatus B)

**Standard Plate Counts**

Max. 1×10<sup>3</sup> cfu/g (Analysis for Hygienic Chemists)

**Moulds and Yeasts**

Max. 1×10<sup>2</sup> cfu/g (Analysis for Hygienic Chemists)

**Coliforms**

Negative (Analysis for Hygienic Chemists)

**Residual Solvents**

**(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)

**Composition**

<u>Ingredient</u>	<u>Content</u>
Thioctic Acid	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	June 25, 2004
Revised Date	October 4, 2017
Specification No.	Z-704EN