



Sales and Marketing of Natural Biocide Formulations

NATRApHASE™ NP20ATP

Anti Oxidant/Preservative

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ANTIOXIDANT NATRAPhASE™ NP20ATP

for use in Food

PRODUCT DESCRIPTION AND SPECIFICATION

Description: NATRAPhASE™ NP20ATP (the “all in one” Antioxidant/Chelator/Carrier/Emulsifier system) is off-white to buff, crystalline powder with a slight odour. It consists of a synergistic mixture of Ascorbyl Palmitate, d- α -Tocopherol and Citric Acid on a Dextrose base. It also contains an emulsifier, which enables the mixture to disperse in water at room temperature.

Specifications:	Appearance:	Off-white to buff, crystalline powder
	Dispersion in water: (0.1% w/w)	Passes test
	Total aerobic viable count:	Not more than 10,000 per gm

Product	Product Code	Application	Packaging
NATROX™ NP20ATP	NP20ATP010	Meat, Vegetable and Fats, Mayonnaise dressings, Sauces, Baby Foods, Dairy products	10kg poly lined plastic pail

All ingredients are Kosher, GMO and Gelatine free. NatrapHase™ NP20ATP is soluble in fats, oils and dispersible in water.

Functionality:

- Delays lipid oxidation = longer shelf life
- Inactivation of metal ions which catalyse the initiation of oxidation processes
- Makes antioxidant distribution uniform facilitating easier incorporation in liquids pastes or powders

Potential benefits:

- Consumer friendly alternative to traditional antioxidants (BHA- and BHT based antioxidants)
- Improvement of food products by retarding lipid oxidation
- Synergistic effect with d- α - Tocopherol particularly when used in fats and processed foods
- Longer shelf life of oils, fats and processed products
- Consistent product quality from batch to batch by minimising variation in taste, odour, colour and texture with no loss in nutritional value

Main Application areas:

- Vegetable oils, frying oils
- Dairy products and baby foods
- Snacks
- Mayonnaise dressings, sauces
- Meat products (fish, beef, pork and poultry – sausages and burgers).

Usage levels: The exact dosage cannot be stated in general since it depends on the application in question. We generally suggest a concentration of 300ppm.

Directions for use: **NATRApHASE™** NP20ATP can be applied to complex products by spraying, dipping, kneading or injection.

Storage: Below 25°C in unopened original containers. When opened **NATRApHASE™** NP20ATP should still be stored below 25°C in its original container but should be used within 6 months of the date on which it was first opened.

Shelf life: The shelf life of **NATRApHASE™** NP20ATP is six (6) months when stored according to recommendation.

Packaging: **NATRApHASE™** NP20ATP is available in 10kg net poly line plastic containers. Other sizes of packaging are available on request.

Safety and Handling: A Materials Health and Safety Data Sheet is available on pages 4 - 7

MATERIALS SAFETY DATA SHEET
(Complies to EU Directive 2001/58/CE)

ANTIOXIDANT NATRAPHASE™ NP20ATP

I. PRODUCT DESCRIPTION AND SPECIFICATION

Description: **NATRAPHASE™** NP20ATP is off-white to buff, crystalline powder with a slight odour. It consists of a synergistic mixture of Ascorbyl Palmitate, d- α -Tocopherol and Citric Acid on a dextrose base. It also contains an emulsifier, which enables the mixture to disperse in water at room temperature.

Specifications:

Appearance:	Off-white to buff, crystalline powder
Dispersion in water: (0.1% w.w)	Passes test
Total aerobic viable count:	Not more than 5000 per gm

II. SAFETY INFORMATION

1. IDENTIFICATION

Name: **NATRAPHASE™** NP20ATP
Product Code: NP20ATP010
Supplied by: Natural Preserves Limited
Unit 10, Business Centre
Eanam Wharf
Blackburn
Lancashire BB1 5BL
Telephone: +44 (0)1254 678703 Fax: +44 (0)1254 662 590
E-mail: info@naturalpreserves.co.uk

2. COMPOSITION

Antioxidant mixture with Food Grade acidifier and emulsifier on Food Grade dextrose for use in food applications.

<u>Contents:</u>	<u>CAS Reg No.</u>	<u>EINECS No.</u>
Anhydrous Dextrose:	00050-99-7	200-075-1
Ascorbyl Palmitate:	137-66-6	205 3054
Glyceryl Monostearate:	31566-31-1	250-705-4
d- α -Tocopherol	10191-41-0	233 4660
Anhydrous Citric Acid	77-92-9	201 0691

3. HAZARD IDENTIFICATION **NATRAPHASE™** NP20ATP is classified as non-hazardous.

4. FIRST AID MEASURES

- Eye Contact:** Irrigate thoroughly with water, open eyelids forcibly.
- Skin:** Brush off any adhering particles; wash affected skin with water and soap (not solvents); report any skin irritation to medical advisor.
- Inhalation:** Bring immediately to fresh air; consult physician if discomfort occurs or persists.
- Excessive Ingestion:** Symptomatic treatment by physician.

5. FIRE FIGHTING MEASURES

Combustible powder. Use water spray, foam, powder, carbon dioxide or other extinguishing medium appropriate to existing fires. Breathing apparatus must be worn.

6. ACCIDENTAL RELEASE MEASURE

Collect spillage avoiding the spread of dust. If present in solution soak up in inert granular absorbent or rags. Dispose in accordance with Section 13. Vacuum clean or wash area thoroughly with detergent and water.

7. HANDLING AND STORAGE

Sensible precautions should be taken to avoid contact with the eyes and skin, inhalation of dust or accidental ingestion. Observe strict cleanliness and personal hygiene at all times.

NATRApHASE™ NP20ATP is a combustible powder and there is a danger of dust explosion. Equipment must be fully earthed to prevent accumulation of static electricity and other sources of ignition must be avoided. Avoid dust formation.

Store in the original, sealed container in a dry place at, or below, room temperature. Suitable materials for equipment are stainless steel, aluminium, enamel, glass or good-approved plastic.

Date of manufacturing and "Best use before" dates are shown on each product label. For general planning purposes allow maximum storage period of 6 (six) months from date of delivery.

8. EXPOSURE, CONTROL AND PERSONAL PROTECTION

An official occupation exposure limit for **NATRApHASE™** NP20ATP has not been established but the recommended limited time working weighted average 8 hour working day) is 10.00 mg/m³ (nuisance dust only).

Eye protection and PVC or rubber gloves should be worn as appropriate and local exhaust ventilation employed if there is a risk of exceeding the recommended exposure limit. For unavoidable dusty operations an approved dust mask or positive respirator must be worn and the eyes protected with safety goggles or the respirator face piece.

9. PHYSICAL AND CHEMICAL PROPERTIES

Taste:	Sweetish
Smell:	Slight odour
Molecular mass:	Not relevant – mixture
Bulk density:	About 0.9 kg/litre
Solubility:	Soluble in oils, fats. Dispersible in water at 20°C

10. STABILITY AND REACTIVITY

Protect from humidity, light and heat for quality reasons. Since its function in foods is to react with active oxygen during storage it is incompatible with oxidising agents (particularly peroxides), ferric and silver salts.

11. TOXICOLOGICAL INFORMATION

All the ingredients in **NATRApHASE™** NP20ATP are food grade materials generally regarded as safe for Human and Animal consumption.

Pure Ascorbyl Palmitate:

Acute toxicity:	LD50>10,000 mg/kg
Local effects:	May cause irritation of eyes and mucous membranes.
Specific effects:	Not mutagenic (Ames-test)

Pure d-α-Tocopherol

Acute toxicity:	LD50 >5,000 mg/kg Excessive oral intake can cause headache, fatigue, weakness, digestive disturbance and nausea. Prolonged and intensive skin contact may lead to erythema and contact dermatitis.
Local effect:	No eye irritation Skin irritation Oxidation products irritate skin.
Sensitisation:	Not sensitising
Specific effects:	Not mutagenic (Ames-test) Not phototoxic

Pure Citric Acid:

Acute Toxicity:	LD50>5,000 mg/kg
Local effects:	Severe eye irritation Moderate skin irritation
Specific effects:	Not mutagenic (Ames-test) Not teratogenic

12. ECOLOGICAL INFORMATION

Biodegradable. **NATRApHASE™** NP20ATP is not expected to result in any persisting environmental influence.

13. DISPOSAL CONSIDERATION

Small quantities may be disposed with general waste. Larger amounts must be disposed in accordance with The Special Waste Regulations at a licensed incinerator or landfill site.

14. TRANSPORT INFORMATION

Not classified as hazardous for transport.

15. REGULATORY INFORMATION

d- α -Tocopherol and Ascorbyl Palmitate, the antioxidant ingredients of **NATRApHASE™** NP20ATP are Non GMO permitted food antioxidants according to EU Regulations 1829/2003 and 1830/2003.

When added to food or drink their presence must be declared on the product label. A suitable declaration might be:-

Either: **Antioxidants – Ascorbyl Palmitate; d- α -Tocopherol**

Or: **Antioxidants – E304(i); E307**

Citric Acid is a permitted acidifier within EU and UK Regulations. While it may be declared on a product label (Acidifier – Citric Acid; or; Acidifier – E330) it is arguable that it is a technological additive which has no function in the final product and therefore need not be declared. Similarly Glyceryl Monostearate is an accepted emulsifier included for a technological purpose which is largely irrelevant to the final food product and need not be declared.

NATRApHASE™ NP20ATP is supplied for use in food recipes/processing and is not for retail sale. It is therefore labelled in accordance with EC Regulation 67/548/CEE and 1999/45/CE of the Food Additives Labelling Regulations 1999.

16. INFORMATION ON USE

Uses: As an antioxidant/preservative for use in food recipes and processing

Pack size: 10 kg sealed poly bag in a sealed plastic tub

Country of Origin: United Kingdom

DIETARY INTOLERANCE DATA

Product: NATRAPHASE™ NP20ATP

Product Code: NP20ATP010

Supplier: Natural Preserves Ltd

Does the product contain any of the following?

Ingredient	Yes	No	Additional information
Genetically modified organisms		✓	
Material from or produced from Genetically Modified Organisms		✓	
Seafood		✓	
Oil of seafood		✓	
Nuts		✓	
Oils of nuts		✓	
Seeds		✓	
Oils of seeds		✓	
Sesame seeds of their derivatives		✓	

Is this product suitable for?

Ingredient	Yes	No	Additional information
Vegetarians	✓		
Vegans	✓		
Kosher foods/diets	✓		
Celiac disease	✓		
Diabetics	?		Contains dextrose

DIETARY INTOLERANCE DATA

Product: NATRAPHASE™ NP20ATP

Product Code: NP20ATP010

Supplier: Natural Preserves Ltd

Does the product contain any of the following?

Ingredient	Yes	No	Additional Information
Wheat or wheat derivatives		✓	
Gluten		✓	
Egg or egg derivatives		✓	
Maize or maize derivatives	✓		Dextrose is produced from Maize Starch
Soya or Soya derivatives		✓	
Artificial colour		✓	
Added colour		✓	
Artificial flavourings		✓	
Added salt		✓	
Added sugars		✓	
Benzoates		✓	
Sulphur Dioxide		✓	
Other preservatives/acidifiers		✓	
BHA/BHT		✓	
Other antioxidants		✓	
Glutamate (% if naturally occurring)		✓	
Yeast or yeast extracts		✓	
Level of chloropropanols if present		✓	
Garlic		✓	
Bovine products or by products		✓	
Cows milk or cows milk products		✓	
Other animal products or by products		✓	

Dextrose Anhydrous

- **Allergens:** comply in accordance with the ALBA recommendations and with Annex IIIa of the European Food Labelling Directive 2000/13/EC as amended by Directive 2003/89/EC and completed by Directive 2006/142/EC. Nutritional Values are in accordance with Council Directive 90/496/EEC on nutritional labelling for foodstuffs.
- **GMO Statement:** Within Europe the Dextrose Anhydrous complies with EU GMO criteria as principally laid down under EC Regulation No 1829/2003 on "genetically modified food and feed" and EC Regulation No 1830/2003 on "the traceability and labelling of food and feed products produced from GMO's.
- **Legal Requirement:** Dextrose Anhydrous complies with Directive 2001/111/EEC – certain sugars intended for human consumption.

Natural Preserves has used every possible care in compiling, preparing and issuing this information. Manufacturers using this product must nevertheless satisfy themselves of the suitability of the material for incorporation in their own end-products having regard to all relevant obligations therewith, whether under the Food Safety Act, Feeding Stuffs Regulations, Health & Safety at Work Act, Control of Substances Hazardous to Health Regulations or any other relevant legislation or common law requirement.

The information contained in this publication is based on our own research and development work and is to the best of our knowledge reliable. Users should, however, conduct their own tests to determine the suitability of our product for their own specific purposes. Statements contained herein should not be considered as a warranty of any kind, expressed or implied and no liability is accepted for the infringement of any patents.



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