



Sales and Marketing of Natural Biocide Formulations

## **NATRAPHASE™ 30S**

### **Food Processing Aid**

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## FOOD PROCESSING AID

### NATRAPHASE™ 30S

#### PRODUCT DESCRIPTION AND SPECIFICATION

**Description:** NATRAPHASE™ 30S is a 30% clear, natural acidulant solution which has been formulated specifically to preserve and extend shelf life. NATRAPHASE is GRAS in the USA and approved for food applications in Canada, Mexico and the European Union as a pH control agent, leavening agent and/or processing aid.

#### Applications:

- Dressings, sauces, confectionery fillings, toppings, beverages, cheeses and syrups.
- The low sour intensity works well in chocolate, vanilla, banana, coconut, caramel and toffee.
- Natraphase brings out a more ripe fruit flavour like peach, pear and strawberry.

#### Functionality:

- Lower pH
- Anti microbial
- Preserve and extend shelf life.
- Enhance flavour
- Reduce salt levels as NATRAPHASE will enhance the flavour of salt.
- Increases perceived sweetness – a 15% sweetener reduction can be achieved.

#### Potential benefits:

- Consumer friendly alternative to traditional sulphites.
- Improvement of food products by significantly “slowing up” the degradation process and hence improving the shelf life of produce.
- Consistent product quality from batch to batch. Quality improvements include improvements in texture, colour and flavour and greater nutrient retention.
- Low usage rates provide significant cost savings. Process improvements using **NATRAPHASE™ 30S** include energy savings, increased production and lower equipment and packaging costs.
- Products with a pH greater than 4.60 require retort/aseptic processing. The high temperatures required for retort can alter texture, taste and colour of food. Critical factors for retort processing are time, temperature and pH. Decreasing the pH level with **NATRAPHASE™ 30S** allows for less processing time and lower temperatures to be used without compromising microbial stability or flavour.
- By using **NATRAPHASE™ 30S** it is also feasible to convert a retort aseptic process to a hot fill process as long as the pH is less than 4.60

- Usage levels:** We generally suggest a concentration of 0.10%. Less NATRAPHASE is required to lower pH compared to other acidulants like Citric Acid. For example to establish a standard pH of 3.20 in a beverage requires only 0.06% of NATRAPHASE compared to 0.12% using Citric Acid to achieve the same pH level.
- Shelf life:** The shelf life of **NATRAPHASE™ 30S** is one (1) year from packaging date (**unopened**). Store tightly closed.
- Packaging:** **NATRAPHASE™ 30S** is available as a 30% liquid in 1000 kg Intermediate Bulk Containers (IBC). Tanker deliveries can also be made available. Or alternatively as a free flowing powder (**NATRAPHASE™ 30P**) in 25kg poly line bags,
- Safety and Handling:** A materials Health and Safety Data Sheet is available on pages 4 - 5



#### 4. FIRST AID MEASURES

- Eye Contact:** Irrigate thoroughly with water, open eyelids forcibly.
- Skin:** Wash affected skin with water (not solvents); report any skin irritation to medical advisor.
- Excessive Ingestion: DO NOT** induce vomiting. Drink copious amounts of water. Follow with Milk of Magnesia, beaten eggs or vegetable oil. Contact medical physician immediately.

#### 5. FIRE FIGHTING MEASURES

Non Flammable. Non combustible

#### 6. ACCIDENTAL RELEASE MEASURE

Dispose in accordance with Section 13.  
Wash area thoroughly with water.  
Neutralise with weak alkaline solution.  
Avoid contact with skin and eyes.  
Do not allow release into drainage system.

#### 7. HANDLING AND STORAGE

Sensible precautions should be taken to avoid contact with the eyes and skin, inhalation or accidental ingestion.  
Observe strict cleanliness and personal hygiene at all times.  
Keep container tightly closed.  
Store in a cool, dry area.  
Protect from light and heat  
Keep away from odorous and toxic substances.

#### 8. EXPOSURE, CONTROL AND PERSONAL PROTECTION

An official occupation exposure limit for **NATRAPHASE™ 30S** has not been established but the recommended limited time working weighted average (8 hour working day) is 10.00 mg/m<sup>3</sup>

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.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance/Colour:** Clear weak acidic solution
- Assay:** 30% Concentrate
- Odour:** Fresh
- Bulk Density (@20°C):** 1.02 – 1.04
- Solubility:** Soluble in water.
- Flammability:** Non flammable. Non combustible

## 10. STABILITY AND REACTIVITY

**NATRAPHASE™ 30S is stable.** Protect from humidity, light and heat for quality reasons. DO NOT MIX with concentrated chlorine (bleach), ammonia based cleansers or similar products. However accidental mixing with very dilute solutions of **NATRAPHASE™ 30S** with very dilute solutions of chlorine (bleach), ammonia based cleansers or similar products should not pose health or safety risks.

## 11. TOXICOLOGICAL INFORMATION

All the ingredients in **NATRAPHASE™ 30S** are food grade materials generally regarded as safe for use as a processing aid.

**Oral:** LD<sub>50</sub>>2800 mg/kg  
**Local effects:** May cause irritation of eyes, skin and mucous membranes.  
**Specific effects:** Not mutagenic (Ames-test)

## 12. ECOLOGICAL INFORMATION

**NATRAPHASE** is not expected to result in any persisting environmental influence. Material decomposes in soil. Studies do show that there are no adverse effects applying **NATRAPHASE™ 30S** directly to crops.

## 13. DISPOSAL CONSIDERATION

Discharge, treatment must be disposed/treated in accordance with The Special Waste Regulations in accordance with local, regional and State laws and regulations.

## 14. TRANSPORT INFORMATION

Not classified as hazardous for transport.

## 15. REGULATORY INFORMATION

### European Union (EU): Dangerous Substances (Annex 1)

- **EC No. 231-665-7**
- **Labels: Xi (irritant)**
- **Risk Phrases: R41**
- **Safety Phrases: S(2-)24-26**

**NATRAPHASE™ 30S** is supplied for use as a pH regulator, leavening agent and processing aid and is not for retail sale. Classification and labelling is in accordance with Directives 67/548/CEE and 1999/45/CE

## 16. ADDITIONAL INFORMATION

### **NATRAPHASE™ 30S satisfies:**

Food Chemicals Codex 5<sup>th</sup> Edition specifications  
Categorised: Generally Recognised as Safe (GRAS) by the FDA  
Produced under ISO9001:2000 Certified Quality Management Systems  
Shelf Life of NATRAPHASE is 12 months from production date.

**Country of Origin:** United Kingdom



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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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