



Sales and Marketing of Natural Biocide Formulations

## **NATRApHASE™ FVS**

### **All Natural Fruit and Vegetable Wash**

**Improves overall Health and Safety of Fruit and Vegetables**

#### **Table of Contents**

**Page**

**1-3**      **NATRApHASE™ FVS - Use in Foods**

**4-6**      **NATRApHASE™ FVS – Material Safety Data Sheet and Specification**

## **NATRApHASE™ FVS**

### **for use in Food**

#### **PRODUCT DESCRIPTION AND SPECIFICATION**

**Description:** **NATRApHASE™ FVS** is a natural clear, yellow to light brown liquid. **NATRApHASE™ FVS** is extremely effective when applied to fresh and pre-cut fruit and vegetables with high organic/biofilm loadings. All ingredients are classified GRAS (Generally Recognised as Safe) with the FDA.

**NATROX™ FVS** can also be used in post harvest applications to protect produce from pathogenic attack during storage or transportation. **NATRApHASE™ FVS** embraces an all natural environmentally sound methodology to enhance the overall production and profitability of produce processing. **NATRApHASE™ FVS** can be applied via dipping, spraying and fogging.

#### **Functionality:**

- Removes the biofilm.
- Destroys the contained bacteria.
- Provides residual effect to prevent further infection.

#### **Potential benefits:**

- All natural, non toxic, non hazardous organic process wash aid for fruit and vegetables.
- Consumer/Food Processor friendly alternative to traditional decontaminants such as chlorine, chlorine dioxide, Peracetic acid and ozone. Provides for a safer and healthier work environment.
- More affective over a broad spectrum of microbes over a broad spectrum of fruit and vegetables.
- Considerably extends the shelf life and the observed freshness of fresh and pre-cut produce at the retail level.
- Breaks down harmful biofilm which eradicates the enclosed bacteria and provides residual effects to avert further infection.
- Maintains efficacy when exposed to organic matter, unlike chlorine based products.
- Non Tainting.
- Washes away pesticides, herbicides, fungicides and fertilizer residues.
- Does not contain synthetic biocides or antibiotics.
- Non – mutagenic - micro organisms cannot develop immunity.
- >98% biodegradable.
- Residues are safe towards human and animals.
- Consistent product quality from batch to batch by minimising variation in taste, odour, colour and texture with no loss in nutritional value.
- Cost effective.

**Application:** NATRAPHASE™FVS may be applied to fruit and vegetables by dipping, spraying and fogging techniques.

Examples of Fruit and Vegetable where NATRAPHASE™ FVS is effective as a wash aid:

- Leaf Salads : Lettuce
- Tubers: Potatoes, carrots
- Flowery Fruits: Broccoli
- Stone Fruit: Apricots, Plums, Nectarines
- Vegetable Fruits: Cucumbers, Peppers
- Vine Fruit: Grapes, Melons, Tomatoes, Berries, Strawberries
- Citrus Fruit: Lemons, Oranges, Grapefruit
- Tropical Fruit: Pineapples, Papayas

**Usage levels:** The exact dosage cannot be stated in general since it depends on the application and degree of soiling. We generally suggest a concentration of 0.5% - 1.5%.

**Safety and Handling:** A materials Health and Safety Data Sheet is available on pages 4 - 6

## MATERIAL SAFETY DATA SHEET

### NATRApHASE™ FVS

#### I. PRODUCT DESCRIPTION AND SPECIFICATION

<b>Description:</b>	<b>NATRApHASE™ FVS</b> is a natural clear, yellow to light brown liquid. It consists of a proprietary blend of Bioflavonoid Complex, Saponins and Fruit Acids.	
<b>Specifications:</b>	Appearance:	Clear, yellow to light brown viscous liquid
	Taste:	Mild, characteristic
	Odour:	None
	pH:	1.30 – 1.70
	Density:	1.027 – 1.040
	Solubility:	Product dissolves completely in water.

#### II. SAFETY INFORMATION

##### 1. IDENTIFICATION

<b>Name:</b>	<b>NATRApHASE™ FVS</b>	
<b>Product Code:</b>	NPFVS020, NPFVS220, NPFVSIBC	(20Litre, 220Litre, 1000Litre)
<b>Supplied by:</b>	Natural Preserves Limited Unit 10, Business Centre Eanam Wharf Blackburn Lancashire BB1 5BL Telephone: +44 (0)1254 678703 Fax: +44 (0)1254 662590 E-mail: <a href="mailto:info@naturalpreserves.co.uk">info@naturalpreserves.co.uk</a>	

##### 2. COMPOSITION

<b>Chemical Name:</b>	<b>NATRApHASE™FVS</b> is a natural clear, yellow to light brown liquid. It consists of a proprietary blend of Bioflavonoid Complex, Saponins and Fruit Acids.
<b>Synonyms:</b>	<b>None</b>
<b>CAS Number:</b>	<b>72968-50-4</b>

**3. HAZARD IDENTIFICATION**      **NATRApHASE™ FVS** is classified as non hazardous

##### 4. FIRST AID MEASURES

<b>Eye Contact:</b>	Irrigate thoroughly with water, open eyelids forcibly.
<b>Skin:</b>	Wash affected skin with water. Report any skin irritation to medical advisor.
<b>Inhalation:</b>	Non Volatile liquid product; consult physician if discomfort occurs or persists.
<b>Excessive Ingestion:</b>	Drink copious amounts of water. Consult physician if discomfort occurs or persists.

## 5. FIRE FIGHTING MEASURES

Product is Non Combustible.

## 6. ACCIDENTAL RELEASE MEASURE

**Personal Precautions:** Wear rubber gloves if prolonged contact with concentrated solution.  
Avoid contact with skin and eyes.

**Environmental:** No particular/specific measures required. Can wash to drains with large amounts of water  
Absorb large spillage with sand and neutralise with lime or sodium carbonate then place in a closed container for transfer to an approved waste site.

## 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 at ambient temperature.

Protect from excess heat

Keep away from odorous and toxic substances.

Supplied in 20litre, 220litre, IBC (1000litre) or Tanker.

## 8. EXPOSURE, CONTROL AND PERSONAL PROTECTION

No specific measures are required for **NATRAPHASE™ FVS** provided the product is handled in accordance with general rules/regulations of occupational hygiene and safety.

Eye protection and PVC or rubber gloves should be worn as appropriate.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance/Colour:** Clear yellow to light brown liquid

**Odour:** None

**Molecular mass:** Not relevant – mixture

**Flash Point:** Non Combustible

**Density (@20°C):** 1.027 – 1.040

**Solubility:** Completely soluble in water.

**Degradability:** > 98% biodegradable

## 10. STABILITY AND REACTIVITY

Stable under normal storage conditions.

Protect from excess heat for quality reasons.

Protect from frost.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute Toxicity:</b>	Non hazardous substance when use correctly
<b>Local effect:</b>	Mild eye irritation on contact. Unlikely to cause eye damage Skin irritation: may give rise to mild rash and de-fatting effect. Oxidation products irritate skin.
<b>Ingestion:</b>	No known effects
<b>Inhalation:</b>	No known effects
<b>Sensitisation:</b>	Not sensitising
<b>Specific effects:</b>	Not mutagenic (Ames-test) Not phototoxic

## 12. ECOLOGICAL INFORMATION

No adverse Eco-toxicity effects.  
Greater than 98% biodegradable.  
Product dissolves completely in water.  
No known accumulation.

## 13. DISPOSAL CONSIDERATION

Discharge: treatment must be disposed/treated in accordance with The Special Waste Regulations at a licensed incinerator or landfill site.

## 14. TRANSPORT INFORMATION

Not classified as hazardous for transport. Unless containers are palletised never stack more than 2 high.

## 15. ADDITIONAL INFORMATION

## 16. INFORMATION ON USE

<b>Uses:</b>	<b>NATRApHASE™FVS</b> is a non toxic organic process wash aid for use in food and associated industries.
<b>Pack size:</b>	20litre, 220litre, IBC (1000litre) or Tanker.
<b>Country of Origin:</b>	United Kingdom

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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