

PRODUCT

ORGANIC ANTI-BACTERIAL & ANTI-VIRAL

CODE

BP10 – POWDER/LIQUID (ORCON)

Composition	Ingredient	Powder	Liquid
	Eugenol	01.00% w/w min.	01.00% w/v min.
	Potassium Salt of fatty acids	06.00% w/w min.	99.00% w/v max.
	Sodium salts	93.00% w/w max.	-

Target

Bacterial diseases like Leaf Blight, Leaf Spot, Cankers etc. in Tomato, Potato, Rice, Carrot, Cucurbits etc. This highly effective formula also manages viral diseases like Leaf Curl Virus, Yellow Mosaic Virus etc. on Chilli, Okra, Tomato, Papaya, Cucurbits, Cotton, Spices etc.

Mode of Action

As Anti-Bacterial: Eugenol in clove oil has both anti-bacterial and bacteriostatic action. It induces the cell lysis by the leakage of protein and lipid contents thus damaging the cell wall and cell membrane of the both Gram positive and Gram negative bacteria. Hydrophobicity of Eugenol enables to partition the lipids of the bacterial cell membrane and mitochondria, thus disturbing the cell structures and rendering them more permeable for its anti-bacterial action. Eugenol denatures proteins and reacts with cell membrane phospholipids changing their permeability and inhibiting a great number of Gram-negative and Gram-positive bacteria. Thus, primary mechanism of action of eugenol is disruption of the cytoplasmic membrane, which increases its non-specific permeability allowing Eugenol to be dissolved in the membrane and accumulate with consequent damage to the membrane.

As Anti-Viral: Eugenol directly inactivates the free-virus particles and interferes with virion envelope structures required for entry into host cells. Eugenol ameliorates the oxidative stress and inhibits the expressions of autophagic genes finally impairing the viral strain replication. This results in causing nonspecific and nonproductive binding to host cells preventing a successful infection. Eugenol may act directly upon the virus envelope inhibiting postbinding entry of the virus into cells. A slow buildup of Eugenol on the surface of the capsid over time leads to greater reductions in cell culture infectivity.

How to Apply

Mix the recommended quantity thoroughly in sufficient amount of water & spray on both sides of the leaves / affected areas.

Shelf Life

3 years from the date of manufacture.

Antidote

No specific antidote. Treat symptomatically.

Dosage

2 g / 2 ml per litre of water

Studies Done

Bio-efficacy

Product	University	Disease Studied
BP10 Powder	University of Agricultural Sciences, Dharwad	Crop: Tomato Alternaria Leaf Blight Leaf Curl Virus
BP10 (Orcon) Powder	Mahatma Phule Krishi Vidyapeeth, Rahuri	Crop: Chilli Leaf Curl Virus Phytotoxicity

Non-toxicity & Biodegradation

National Toxicology Centre, Pune

Free from Pesticides

Reliable Analytical Lab., Mumbai

Organic Approval as per NPOP (by APEDA)

1. IMO Control
2. VOCA

Test Protocol:

Test	Sample	Reference
Eugenol	Liquid & Powder	Determine by gas chromatography (2.4.14). Reference: IP 2007 p: 1395
Total Fatty Matter	Liquid & Powder	As per IS 286: Methods of Sampling and Test for Soaps.
Total solids	Powder	As Loss on Drying as Moisture content (TS % = 100 – % LOD)