



# BioSPECTRA™ 100 SC

For use to control several postharvest diseases on pome fruit, stone fruit and cherries.

**Active Ingredient:**

Natamycin\* ..... 10.34%

**Other Ingredients:** ..... 89.66%

**Total:** ..... 100.00%

\*CAS No. 7681-93-8

\*Contains 0.93 lbs Natamycin per gallon.

## CAUTION KEEP OUT OF REACH OF CHILDREN

See side/back panel for precautionary statements

| First Aid   |   |
|---|---|
| <p>If swallowed</p> <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have a person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> | <p>If in eyes</p> <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul> |
| <p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p>   |   |
| <p><b>HOT LINE NUMBER</b></p> <p>Medical Emergency Phone Number 888-271-4649 (PROSAR)<br/>Transportation Emergency Phone Number 800-424-9300 (CHEMTREC)</p>   |   |

EPA Registration Number: 87485-2-64864

EPA Est. No.:

Net Content: 2.64 gallons



Distributed By:

**Pace International** LLC

5661 Branch Road, Wapato, WA 98951 800.936.6750 [www.paceint.com](http://www.paceint.com)

## PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS-CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, and chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE): Mixers, Loaders, Applicators and all others handlers must wear:**

- Protective eyewear
- Long pants
- Long sleeved shirt
- Socks plus shoes
- Water proof gloves

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS:

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer system without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

## DIRECTIONS FOR USE

**It is a violation of Federal law to use this product in a manner inconsistent with its labeling.** Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may in the area during application. For any requirement specific to your State and Tribe, consult the State/Tribal agency responsible for pesticide regulation.

### General Information

BioSpectra 100SC is a stable aqueous suspension containing Natamycin, a natural fermentation product of *Streptomyces natalensis*. Natamycin is classified as a macrolide polyene antifungal compound and has a unique mode of action binding to ergosterol which is present in the cell membranes of yeasts and fungi preventing germination of fungal spores and inhibiting beginning growth of hypha. Natamycin has no effect against other types of microorganism or against fungal mycelium once growth begins.

### Fungicide Resistance Management

Use of BioSpectra 100SC should be integrated into an overall disease management program within each packinghouse. Fungal pathogens can develop resistance to products with the same mode of action when used repeatedly. Because resistance development cannot be predicted, use of postharvest resistance management strategies should be practiced. These may include rotating and/or tank mixing with product having different modes of action. Responsible resistance management practices are necessary to ensure the long-term effectiveness for decay control.

### Mixing Instructions

Fill tank with half of the required amount of water or water wax and start mechanical agitation. Add the required amount of BioSpectra 100SC and then add the remaining volume of water or water wax. Maintain agitation after mixing and do not allow treating solution to stand overnight or for prolonged periods. For in-line injection systems better distribution will be achieved by injecting a larger volume of a more dilute solution per unit of time.

The physical compatibility of BioSpectra 100SC with all tank mix partners and wax types has not been fully investigated. This product cannot be mixed with any product containing a label prohibition against such mixing. Follow the more restrictive labeling requirements of any tank mix partner. No label dosage rates for the individual products may be exceeded.

Prior to tank mixing with BioSpectra 100SC, conduct a jar test with the volumes and rates typically used for postharvest disease control. Add proportionate amounts of the products to a small container of water or water wax in the following order: Wettable powders and water-dispersible granules first, followed by liquid flowables, and emulsifiable concentrates last. After thorough mixing, let stand for at least 15 minutes. Separation, globules, sludge, flakes or other precipitates are indicative of physical incompatibility. Physical compatibility is indicated if the combination remains mixed or can be remixed readily.

THE CROP SAFETY OF ALL POTENTIAL PESTICIDE TANK MIXES WITH BIOSPECTRA 100SC INCLUDING WAXES, HAS NOT BEEN TESTED ON ALL CROPS AND VARIETIES. BEFORE APPLYING ANY TANK MIXTURE, CONFIRM SAFETY TO THE TARGET CROP BEFORE USE.

### Crop Use Directions

POME FRUIT: Apple (*Malus domestica*), Crabapple (*Malus* spp.), Loquat (*Eriobotrya japonica*), Mayhaw (*Crataegus azarolus*), Pear (*Pyrus communis*), Oriental pear (*Pyrus* spp.), Quince (*Chaenomeles* spp.) and cultivars, varieties and/or hybrids of these.

Use BioSpectra 100SC as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Blue mold (*Penicillium expansum*.)
- Gray mold (*Botrytis cinerea*)
- Mucor rot (*Mucor piriformis*)
- Sphaeropsis rot (*Sphaeropsis pyriputrescens*)
- Phacidiopycnis rot (*Phacidiopycnis piri*)
- Speck rot (*Phacidiopycnis washingtonensis*)

| Application Method                                     | Disease  | Rate fl.oz              | Directions  |
|--|--|-------------------------|---|
| Bin/Truck Drench or In-Line Dip/<br>Drench or Flooders | Blue mold<br>Gray mold<br>Mucor rot<br>Sphaeropsis rot<br>Phacidiopycnis rot | 57-114 fl. oz./100 gals | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gals of water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion</li> <li>• For in-line dip or drench applications, treat fruits for 10 seconds and allow the fruit to drain.</li> </ul> |
| In-line Aqueous or Fruit Coating<br>Spray Application  | Speck rot  | 57-114 fl. oz./100 gals | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Use T-jet, CDA or similar application system.</li> </ul>  |

STONE FRUIT: Apricot (*Prunus armeniaca*), Nectarine (*Prunus persica*), Peach (*Prunus persica*), Plum, Chickasaw (*Prunus agustifolia*); Plum, Damson (*Prunus domestica* spp. *insititia*); Plum, Japanese (*Prunus salicina*); Plumcot (*Prunus armeniaca* x *P. domestica*); Prune (fresh)(*Prunus domestica*, *Prunus* spp.); as well as all other cultivars and hybrids of these.

Use BioSpectra 100SC as a postharvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Brown rot (*Monilinia* spp.)
- Gray mold (*Botrytis cinerea*)
- Sour rot (*Geotricum* spp.)
- Rhizopus rot (*Rhizopus* spp.)

| Application Method                                    | Disease  | Rate fl.oz                                | Directions   |
|---|--|---|--|
| In-Line Dip/drench                                    | Brown rot<br>Gray mold<br>Sour rot<br>Rhizopus rot | 57-114 fl. oz. / 100 gals                 | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 57-114 fl. oz. in 100 gals of water, wax/emulsion, or aqueous dilution of wax/oil emulsion.</li> <li>• Dip for 10 seconds and allow the fruit to drain.</li> </ul>          |
| In-line Aqueous or Fruit Coating<br>Spray Application |  | 28-114 fl. oz. /<br>200,000 lbs. of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix the fungicide solution in appropriate water, wax/oil emulsion, or aqueous dilution of wax oil/emulsion.</li> <li>• Use T-jet, CDA or similar application system.</li> </ul> |

CHERRIES: Cherry, sweet (*Prunus avium*); Cherry, tart (*Prunus cerasus*); and all other cultivars and hybrids of these.

Use BioSpectra 100SC as a post-harvest dip, drench, flood, or spray for the control of certain postharvest fruit rots caused by:

- Brown rot (*Monilinia spp.*)
- Gray mold (*Botrytis cinerea*)

| Application Method                        | Disease                | Rate fl.oz                             | Directions  |
|---|------------------------|--|---|
| In-line Aqueous or Flooder<br>Application | Brown rot<br>Gray mold | 28-114 fl. oz./<br>50,000 lbs of fruit | <ul style="list-style-type: none"> <li>• Ensure proper coverage of fruit.</li> <li>• Mix 28-114 fl. oz. in 100 gals of water, wax/emulsion, or aqueous dilution of wax/oil emulsion.</li> <li>• Use flooder, T-jet or similar application system</li> </ul> |
| High volume application                   |                        |  |   |

### Storage and Disposal

**Do not contaminate water, food, or feed by storage or disposal.**

**Pesticide Storage:** Store in original container only in a cool, dry, dark place.

**Pesticide Disposal:** To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drop. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drop. Repeat this procedure two more times. Offer for recycling if available or dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

## **NOTICE TO BUYER**

**IMPORTANT:** Read the information below before using this product. If the terms are not acceptable, you should return the unopened product container immediately for a complete refund.

### **LIMITED WARRANTY, TERMS OF SALE, AND LIMITATION OF LIABILITY**

Upon purchase of this product, purchaser and user agree to the following terms:

**Warranty:** Pace International, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects. To the extent consistent with applicable law, except as expressly stated in the forgoing statement, the Company makes no further warranties, expressly disclaims any implied warranties of merchantability or fitness for a particular purpose, and any representation or warranty.

**Terms of Sale:** The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner or use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

**Limitation of Liability:** To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental, or consequential damages of any kind, including loss of profits or income, and any such claims are hereby waived.

To the extent consistent with applicable law, the Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale, and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.