

## Sample Submission Guidelines for Custom Diagnostics

The quality of the sample is critical for an accurate diagnosis. Below are guidelines for submitting samples that will allow Eurofins STA Laboratories to provide you the most detailed diagnosis. Please be sure to include a completed "Testing Order" form with as much detailed information as possible and keep it separate from any tissue or soil (i.e., enclosed in a zip-lock bag). Please fill out the "Custom Disease Testing" order form and send samples directly to our laboratory (Attn: Judit Monis or Laura Miles) preferably by overnight delivery. Please contact us if you need more information and to reserve a testing slot.

Eurofins STA Laboratories holds current permits and is able to process samples from out of California. Please call the lab for special mailing/shipping instructions.

### **Sampling and Submission Instructions:**

1. Optimal samples should exhibit symptoms without being necrotic (dead). Dead, mushy or dried samples may not be processed.
2. An adequate sample might encompass several plants showing symptoms.
3. Mark sample bags clearly with a number or necessary information (plot, field, row, etc.). The information for each sample should be noted in the "Testing Order" form.
4. Do not add water or pack plant material in wet paper towels. Moisture contributes to quick sample decline. Most samples should be submitted gently pressed in dry paper towels.
5. Keep samples in a cooler or refrigerator until they are submitted.
6. Shake excess soil from the plant sample. Wrap roots in a separate bag and close at the crown line. (Soil organisms may interfere with diagnostic procedures and contaminate samples during shipment. In most cases, soil is not needed for diagnosis. A ESTA plant pathologist will inform you if soil is needed for a complete diagnosis.) If submitting plugs or potted plants, wrap appropriately to avoid soil contaminating other parts of the plant.

### **Additional instructions for suspected virus infection:**

1. Submit fresh, unwilted tissue in dry paper towels.
2. If possible, label and submit apparently healthy tissue for comparison.
3. Most virus samples will be subjected to immunological or molecular tests that require a minimum amount of symptomatic tissue. Each sample should have at least four quarter sized pieces of symptomatic tissue.

Please call the lab for further instructions as many viruses are restricted to different areas of the plant

### **Suspected fungal or bacterial leaf spot infection:**

1. Submit tissue showing varying stages of spot development with at least 10 leaves in the early stage of symptom development for processing.
2. Keep leaves from being crushed in transit, preferably by wrapping them in dry paper towels and placed gently in between two pieces of cardboard.
3. If the spotting is prevalent on other areas of the plant, such as the stem as well, please send sufficient tissue to be examined.

### **Suspected fungal or bacterial infection of whole plant:**

1. Submit several whole plants. If size prohibits this, contact us with specimen details so we may assess what needs to be submitted.
2. Shake off the soil and wrap the root ball in a plastic bag and tie the bag around the crown at soil level. Alternately, please remove the plant at the root line and pack separately if this is easier.

### **Suspected root or soil-borne infection:**

1. Follow the procedures for whole plant diseases, but be sure to include enough plants that have intact root systems.
2. Wrap soil ball, a large handful is sufficient, and roots in a bag that seals them separately from the rest of the plant. Remove the plant at the root line and pack separately if this is easier.

### **Suspected fungal or bacterial gall infection:**

1. Remove the area surrounding the gall or swollen area and submit the gall or swelling in a dry paper towel.
2. Do not submit dry, dead or old galls. Typically only saprophytes can be recovered from this tissue.

## **RESULTS YOU CAN TRUST**

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## Custom Disease Diagnosis Order Form

Please complete this form and return to ESTA Labs with sample shipment (Attn: Judit Monis or Laura Miles)

Company: \_\_\_\_\_ Contact person: \_\_\_\_\_

Address: \_\_\_\_\_ City: \_\_\_\_\_ ST: \_\_\_\_\_

Phone(s): \_\_\_\_\_ Fax: \_\_\_\_\_ Email address: \_\_\_\_\_

Date Submitted: \_\_\_\_\_ Date symptoms noticed? \_\_\_\_\_

### Plant Condition:

**Overall Plant** ☐ Wilted ☐ Stunted ☐ Abnormal Growth ☐ Other \_\_\_\_\_

**Leaves** ☐ Wilted ☐ Spotted ☐ Mottled ☐ Rotted ☐ Yellowed  
☐ Galls ☐ Blighted ☐ Other \_\_\_\_\_

**Roots** ☐ Galls ☐ Rotted ☐ Sloughing ☐ Discolored ☐ Other \_\_\_\_\_

**Trunk, Stem** ☐ Galls ☐ Rotted ☐ Dieback ☐ Canker ☐ Wilted  
☐ Discolored ☐ Overgrowth ☐ Other \_\_\_\_\_

**Fruit** ☐ Rotted ☐ Canker ☐ Spotted ☐ Mottled ☐ Other \_\_\_\_\_

List any chemicals, pesticides or fertilizers recently been applied: \_\_\_\_\_

Did you observe any insect problems? \_\_\_\_\_

Type of Planting: ☐ Field ☐ Greenhouse ☐ Nursery ☐ Other \_\_\_\_\_

Prevalence: ☐ Limited to submitted plants ☐ Localized around submitted plants  
☐ Scattered area ☐ Entire planting

Please complete the following table if possible. Use additional copies if needed. Please follow instructions for sampling for each test. Please label each bag with sample/plant number and visibly mark the plant to facilitate later sampling.

|    | Plant, variety / Location / Field or Identification | Fungal | Viral (list specific virus pathogens to be tested if known) | Bacterial | Other (please specify) |
|----|---|--------|---|-----------|------------------------|
| 1  |   |        |   |           |                        |
| 2  |   |        |   |           |                        |
| 3  |   |        |   |           |                        |
| 4  |   |        |   |           |                        |
| 5  |   |        |   |           |                        |
| 6  |   |        |   |           |                        |
| 7  |   |        |   |           |                        |
| 8  |   |        |   |           |                        |
| 9  |   |        |   |           |                        |
| 10 |   |        |   |           |                        |

Other special instructions or comments: \_\_\_\_\_

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