



Pathology Submittal Instructions

If you are a vegetable grower, involved in nursery or plug production, own an orchard or if you find yourself responsible for landscape installations and maintenance, chances are that sooner or later you will run into a disease problem. When a disease outbreak occurs you may wish to seek the expertise of Waypoint Analytical's Anaheim, CA location which offers plant disease diagnosis. Accurate identification of the problem is paramount for developing the right management strategies to prevent further loss of plant material. The accuracy of a given diagnosis is highly dependent upon the quality of the sample submitted and the amount of background information given, i.e. poor samples equal poor diagnosis. The following are a few tips on submitting samples for pathology work that will help you obtain the best possible diagnostic service for you money.

Collect fresh material and try to submit several specimens that display different stages of the observed symptoms. Keep in mind that the pathogen is not always in symptomatic tissue. For example, symptoms observed in the foliage such as chlorosis, marginal necrosis, leaf drop, and wilt may be associated with a vascular wilt or a root rot therefore include as much of the plant as possible.

Plants in advanced stages of disease development (dead) are poor samples since many secondary organisms will have moved in making isolation and identification of the pathogen difficult.

Place samples in a polyethylene bag and label the bag accurately. Place a dry paper towel in the bag to act as a blotter to prevent plant material from decomposing during transit. When submitting roots, handle these with care. Avoid leaving feeder or rotted roots behind. Include a liter of soil to prevent roots from drying out. This soil can also be used for pH, salinity, fertility and nematode testing if needed.

If submitting an entire plant, wrap a twist-tie around the stem at ground level to keep soil off the foliage.

Include the questionnaire to provide information on growing practices, e.g. fertilizer, growth regulator, herbicide and pesticide applications. Information regarding recent environmental conditions e.g. humidity, temperature, wind, etc. is also very helpful. As obvious as it may seem do not forget to include your name, phone number and email address.

If you are shipping samples to us outside of California, please include USDA APHIS Permit 526 inside and outside the shipping package.

It is very important to keep the samples cool and moist. If samples are taken early and will not be shipped to the lab for several hours, place them either in the refrigerator, or in a cooler with an ice pack. The sooner the samples arrive at the lab the better chance the diagnostician will have to isolate the pathogen(s); Priority or Next Day delivery is best.

You should realize that some plant problems will unfortunately defy complete diagnosis, and it may be necessary to submit additional samples. Although the diagnostician should come closer to a definitive answer with each subsequent sample submitted, there will be time when certain plant problems will go unsolved. Diseases involving more than one casual agents often fall in this category. Finally, if you have any doubts as to what to send or any questions regarding sampling, do not hesitate to give the laboratory a call. The diagnostician will be more than happy to walk you through the process to insure a proper sample is submitted.

www.waypointanalytical.com

4741 E. Hunter Ave., Suite A, Anaheim, Ca 92807
714.282.8777

Pathology Questionnaire/Submittal Form

1. Company name: _____ Contact Name: _____ Mailing Address: _____ City/State/Zip: _____ Job Name/Number: _____ Phone: _____ Fax: _____ Email: _____	11. Effect on plant: () slight; () moderate; () severe; Other: _____
2. I would like my sample results: () Faxed; () Emailed Plant/Crop affected: _____ Variety: _____	12. Soil type: () heavy clay; () clay-loam; () loam; () sandy; () rocky; () container media
3. Age: _____ Type of planting: () commercial; () greenhouse; () nursery; () residential; () field; other: _____	13. Drainage: () good; () medium; () poor
4. Plant site (for landscape only): () street side; () lawn; () ground bed; () terrace; () patio; () indoor Distribution of disease: () scattered; () localized; () uniform; () on slopes; () high spots; () low spots Percentage of plants affected: _____	14. Weather (past two weeks): () Rain: amount: _____ frequency: _____ relative humidity: _____ () Cloudy; () Partly cloudy; () Sunny; () Unseasonably hot; () Unseasonably cold () Wind - () low; () moderate; () high
5. Part of the plant affected: () roots; () stem/trunk; () seed; () branch/twigs; () leaves; () bulb/corm; () flower; () fruit; () entire plant; other: _____	15. Chemicals applied: (rates, dates & methods of application): Fertilizers: _____ Fungicides: _____ Herbicides: _____ Insecticides: _____ Other: _____
6. General symptoms: () malformation; () canker; () dieback; () galls; () spots; () marginal burn; () gumming; () stunting; () wilting; () mosaic/mottling; () yellowing; () shot hole; () defoliation; () tip burn When and where were symptoms first observed? _____	16. Evidence of insect activity? () yes () no
7. Disease situation: () progressive; () relatively stable Other: _____	17. General disturbances: () gas leak; () construction near by; () soil added or removed from around plants; () excavation nearby? _____ feet away () other: _____

SEND SAMPLES TO:
Waypoint Analytical
4741 E. Hunter Ave.
Suite A
Anaheim, CA 92807
714.282.8777



Waypoint
ANALYTICAL

EMAIL

PRINT

NO PERMIT WILL BE ISSUED TO MOVE AND USE LIVE INSECTS OR PLANT
PESTS OR NOXIOUS WEEDS UNTIL A COMPLETED APPLICATION IS RECEIVED.

DEPARTMENT OF FOOD AND AGRICULTURE PLANT HEALTH AND PEST PREVENTION SERVICES 1220 N STREET, ROOM 221 SACRAMENTO, CALIFORNIA 95814			SECTION A TO BE COMPLETED BY APPLICANT		
APPLICATION AND PERMIT TO MOVE AND USE LIVE PLANT PESTS OR INSECTS OR NOXIOUS WEEDS (Attachments may accompany application if space is insufficient)			1. NAME AND ADDRESS (Include organization name and Zip Code) Stephanie von Denlinger Waypoint Analytical, Inc. 4741 E. Hunter Ave, Suite A Anaheim, CA 92807		
3. TYPE OF ORGANISM <input checked="" type="checkbox"/> Arthropod <input checked="" type="checkbox"/> Pathogen <input type="checkbox"/> Noxious Weed <input checked="" type="checkbox"/> Nematode			2. TELEPHONE NUMBER/FAX NUMBER/EMAIL 714-282-8777 / svondenlinger@wpacorp.com		
4. SCIENTIFIC NAME OF ORGANISM	CLASSIFICATION (Order, Family, etc.)	LIFE STAGES	NUMBER OF SPECIMENS	MOVED OR SHIPPED FROM	WHAT HOST MATERIAL WILL ACCOMPANY PEST?
Plant Pathogenic Virus			Multiple	Throughout State	All Plant Tissues
Plant Pathogenic Fungi	Fungi	Fruiting bodies	Multiple	Throughout State	All Plant Tissue & Soil
Plant Pathogenic Bacteria	Bacteria	Bacterial cell	Multiple	Throughout State	All Plant Tissue
5. ADDRESS OF USE LOCATION IF DIFFERENT THAN ITEM 1.		6. NAME AND ADDRESS OF SUPPLIER Various		7. DESTINATION COUNTY Orange	
8. APPROXIMATE DATE OF MOVEMENT Multiple		9. NUMBER OF SHIPMENTS Multiple		10. METHOD OF SHIPMENT <input checked="" type="checkbox"/> Mail <input type="checkbox"/> Freight <input type="checkbox"/> Baggage <input checked="" type="checkbox"/> Auto	
11. INTENDED USE (Be specific; state whether use will be in a laboratory and/or greenhouse and/or in the field, and, in the case of pathogens, state whether use will include plant inoculation.) Received material will be used strictly for diagnostic purposes involving microscopy examination, traditional culturing onto agar plates and immunological assays. In accordance with our USDA 562 APHIS permit, our facility will not conduct any plant inoculations.					
12. METHODS TO BE USED TO PREVENT ESCAPE OF THE ORGANISMS Clients are instructed to submit samples in sealed double plastic bags. In the lab, samples are handled in restricted room under a certified II BioSafety hood.			13. METHOD OF FINAL DISPOSITION Autoclaving of all received material and associated packaging, which is then taken to municipal landfill.		
14. I/We agree to comply with the Standard Conditions of Permit, and understand that the permit is subject to other conditions which may be prescribed.			SIGNATURE OF APPLICANT Stephanie von D.		DATE 9/20/23

SECTION B - TO BE COMPLETED BY STATE OFFICIAL

PERMIT

 PERMIT NUMBER
 4042

(Permit not valid unless signed by an authorized official of Plant Health and Pest Prevention Services Division)

Under authority of Section 6305 of the Food and Agricultural code, permission is hereby granted to the applicant named above to move and use the organisms described, except as deleted, subject to the conditions stated on, or attached to, this application.

VIOLATION OF ANY OF THE CONDITIONS OF THIS PERMIT SHALL BE SUFFICIENT CAUSE FOR ITS IMMEDIATE REVOCATION.

15. SIGNATURE OF STATE OFFICIAL Erin Lovig	16. DATE ISSUED September 25, 2023	17. EXPIRATION DATE September 30, 2025
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 Copy to: County Agricultural Commissioner
 Pest Exclusion
 Plant Pest Diagnostics Center
 Supplier
 File

September 20, 2023

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Attachment to FORM 66-026

Section 4 – continued

Scientific Name Of Organism	Classification (Order, Family, Etc.)	Life Stages	Number of Specimens	Move or Shipped from	What Host Material will Accompany Pet
Plant Parasitic Nematodes	Nematodes	Eggs, J2, Adults	Multiple	Throughout State	Soil and Plant Tissues



CALIFORNIA DEPARTMENT OF
FOOD & AGRICULTURE

Karen Ross, Secretary

CONDITIONS OF STATE DIAGNOSTIC PERMIT

Permit No. 4042

1. This permit is authorized for the isolation and diagnosis of plant pathogens only, excluding citrus canker, citrus variegated chlorosis, or any plant pathogen not known to occur in California. Isolation and culturing of animal pathogens, such as anthrax, hoof and mouth disease, and exotic Newcastle disease, is prohibited and finds of such diseases must be reported to State regulatory officials. All animal pathogens must be destroyed.
2. If work conducted under the State Plant Pest Permit finds any plant pathogen that is not known to occur in California and/or is a quarantine plant pathogen (regardless of origin) not authorized under a valid permit California Department of Food and Agriculture (CDFA), Permits and Regulations Program must be notified within 24 hours at permits@cdfa.ca.gov. Maintenance of these pathogens is prohibited. It is unlawful for any person who is employed or supported using public funds to neglect to report to CDFA the presence in California of any pest that is new to, or not widely distributed in California (FAC 5307).
3. According to the Food and Agricultural Codes, the movement of organisms and plant material from areas under interior quarantine regulations in California is prohibited except under a special permit specifically written for the quarantine pest. For a current list of California Interior Quarantines, please access the Plant Quarantine Manual at the following website: http://pi.cdfa.ca.gov/pqm/manual/htm/pqm_index.htm#interior.
4. **A written report of pathogens identified (to the lowest known taxon, including host information and provenance) must be provided semi-annually to:** California Department of Food and Agriculture, Permits and Regulations, 1220 N St. Rm 221, Sacramento, CA 95814 or e-mailed to permits@cdfa.ca.gov. **If a culture collection is authorized under this permit, a list of the cultures kept in storage must also be included in the report sent to CDFA.**
5. All regulated organisms or infected plant material shall be shipped in sturdy, escape-proof containers.
6. The permit number shall be affixed on each shipment package containing permitted organisms.
7. Permittee shall maintain a copy of the state diagnostic permit at the facility where the authorized work will be conducted. The copy of the permit shall be made available to state/county inspectors upon request.
8. Upon the arrival of each shipment of a regulated organism, the permittee shall notify either the Orange County Agricultural Commissioner's Office at (714) 955-0102 or the California Department of Food & Agriculture (CDFA), Permits and Regulations Program via email at permits@cdfa.ca.gov. If the county chooses to waive the notification, CDFA permits office must be notified.



9. Permittee shall maintain a log of all shipments received at the facility identified in this permit. At minimum, the permit log shall include for each shipment the type and number of samples for diagnosis (fungal/bacterial/nematode and/or infected plant), common or scientific name of infected plant material, receiver, name and address of the supplier, date and time of shipment received, date of county notification, and the number of shipments received by the permittee each month. The log shall be made available to county/state inspectors upon request.
10. All packages shall be opened in a laminar flow biosafety cabinet, Class II, Type A, in a secure room to prevent the escape of pathogens and insect pests. All isolations and culture transfers shall be conducted in a laminar flow biosafety cabinet that meets or exceeds Class II, Type A or other safe manner. Organisms, and infected plant material if any, shall be kept and used only within the laboratory or designated area at the permittee's address.
11. No living organisms kept under this permit, inoculated plants, or infected plant material shall be removed from the confined, designated area except by prior approval from state agricultural regulatory officials.
12. Without prior notice and during regular business hours, state and county agricultural regulatory officials shall be allowed to inspect the conditions under which the organisms are kept and used.
13. All necessary precautions must be taken to prevent escape of regulated organisms. In the event of an escape of a regulated organism, the permittee shall immediately notify CDFA Permits and Regulations Program via email at permits@cdfa.ca.gov.
14. Upon completion of pathogen diagnosis, all permitted organisms, inoculated plants, infected plant material (including seeds and plant debris) contaminated soil, cultures, containers, tools, packaging and research material, and anything that has contacted the regulated materials must be treated sufficiently with heat or chemicals by autoclaving, incineration, or other equivalent methods to kill, destroy, or deactivate plant pathogens prior to disposal. Glassware and other materials used to conduct research must be decontaminated by soaking in a fresh bleach solution of 10 percent (1:10) for at least 30 minutes, in 70 percent ethanol, with quaternary ammonium compounds, or flamed with ethanol.
15. No plant inoculations are allowed except for what is necessary for identification purposes. Whenever possible, plant inoculations must be performed in growth chambers. If greenhouse studies are necessary and have been authorized under this permit, access to the greenhouse must be limited to the permittee and only trained staff. Greenhouse doors must be kept closed and locked at all times. Greenhouse studies are only authorized for organisms previously confirmed in the laboratory and by CDFA as not being quarantine pests or new records for the state. Permittee must request approval from CDFA prior to moving permitted organisms to the greenhouse.
16. Greenhouse must be screened to prevent vector entry or escape. Ongoing monitoring of potential vectors is mandatory. Insect control must be in practice at all times including pesticide spraying and use of sticky traps.
17. No vector transmission is permitted. If inoculation is necessary for virus diagnostics, only mechanical inoculation is allowed.

18. There is to be no further distribution of these organisms without prior approval from State regulatory officials.
19. The permittee will report permit related problems by e-mail within three days of the occurrence to the California Department of Food and Agriculture, Permits and Regulation Program at permits@cdfa.ca.gov.
20. This permit is issued only for the named permit holder at the address identified on this permit and cannot be transferred or assigned. If the permit holder ceases to be employed at this location where the organisms received under this permit are kept, the permit holder must destroy the organisms unless a new individual submits a Form 66-026, obtains a permit prior to the permittee's departure, and assumes responsibility for the continued maintenance of the authorized organisms.
21. Failure to comply with the conditions of this permit or the detection of any quarantine actionable live plant pest in any shipment authorized by this permit shall be sufficient cause for immediate revocation of this permit.

I, Stephanie von Denlinger, have read and agree to these permit conditions.

Signature: _____

Date: 09/21/2023