RIO GRANDE ANALYTICS

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PCR Diagnostics Submission Form

Company Name:	Internal Use Only
Address:	Date Received:
City: Zip:	Received By:
Contact Name:	Notes:
Email:	
Phone: Date:	
Billing Email:	

Virus Multiplex Detection Assay Sampling

The sampling procedure for the **Virus Multiplex Detection Assay** (which screens for Hop Latent Viroid, Lettuce Chlorosis Virus, and Cannabis Cryptic Virus presence) can be found on the second page of this document. Root sampling is recommended as false negatives are more likely for Hop Latent Viroid when analyzing leaf tissue sampling. Samples must be taken fresh, transported on ice, and delivered to us the same day to ensure no degradation has occured. Feel free to call with any questions you may have.

Sex Detection, THCa Synthase, and CBDa Synthase Assay Sampling

These assays are a bit more forgiving, so the sampling procedure is not as delicate. Bring one mature leaf for each plant you would like to analzye. Samples should be delivered to us on ice within the same day as the tissue is harvested.

Testing Prices:

Virus Multiplex Assay (Hop Latent Viroid, Lettuce Chlorosis Virus, and Cannabis Cryptic Virus)	$25 per assay
Sex Detection Assay	$25 per sample **(3 replicates required)**
THCa Synthase Assay	$15 per assay
CBDa Synthase Assay	$15 per assay

UID #: (Internal Use Only)	Sample Name (For volume submissions, you may write in "All Samples" rather than listing each individual sample)	Additional Sample Information (Information you would like to appear on the CoA, if any)	Check box for each tested needed: THCa Synthase Assay	CBDa Synthase Assay	Sex Detection Assay	Virus Multiplex Assay

RGA Submission Agreement (required for all submissions)

As per 16.8.7 NMAC: By signing I attest I am over 21 years of age (or over 18 with vaild New Mexico Medical Card), I understand these results are for Research and Development purposes only, and I understand should a contaminant listed in NMAC 16.8.7.16 Subsection C be detected, that it must be anonymously reported to NMCCD.

Signature:_____ Date:_____

Rio Grande Analytics LLC will make every effort to provide accurate analysis of samples received, with liability limited to the cost of analysis. Tests may be repeated at the sole discretion of Rio Grande Analytics LLC. No other warranties, expressed or implied, are given. Prices subject to change without notice. All invoice terms are Net 30. For current pricing, and additional terms and conditions, please refer to our website at www.riograndeanalytics.com.

Sampling Procedures Taken Directly From Medicinal Genomics Website Jan. 17, 2024

https://medicinalgenomics.com/product-literature/

Plant Tissue Sampling

Some studies have shown that sampling different parts of an HLVd-infected plant will produce different results. Roots typically produce the strongest qPCR signal if a plant is infected with HLVd, and in some cases, roots have tested positive for HLVd, while leaves from the same plant tested negative.

Sampling multiple locations of the plant will result in a more comprehensive assessment of infection. As many as 3 tissue samples in a single well can be used, however, using more than 3 tissue samples (punches) in a single well can overload the assay and reduce the accuracy of the test.

Items needed for sampling:

- 1.5mL centrifuge tubes, or something to collect samples
- Disposable gloves
- Spray bottle of 10% bleach
- Scissors
- Cup/beaker of 10% bleach solution
- Paper towels

When at the grow location, make sure to clearly label the plants you are sampling from, and the containers for the samples. It is very important that samples are clearly and properly labeled.

Sterilize hands and tools between samples

- Soak trimming tool in 10% bleach solution for 60 seconds
- Spray 10% bleach solution onto any tool parts that were not submerged in bleach solution
- Pro Tip: Put on two pairs of gloves and change the outer set between plants or spray your hands with 10% bleach solution in between each sample.

Root Sampling

1. Lightly brush the topsoil of the plant to reveal surface root.

2. Pull gently on the root to break it away from the root mass.
3. Only a small amount of root tissue is needed (~5 - 10 cm).
4. For soilless media, use sterile scissors to cut small pieces of exposed root tissue.
5. Place root tissue on a clean paper towel or directly into a sample tube after brushing off excess growing medium.