

Results

Dale Williams

Date received: 02/26/2021
Date reported: 03/17/2021

Received as: Pine
Quantity received: 1 sample(s)
Lot(s): Sample 1

Target	Quantity Tested	Completed
MultiScan	1 sample(s)	03/17/2021
<u>Method:</u> Culture		
<u>Results:</u> See Report		
<u>Reviewed By:</u> AA		

Nilesh Maharaj

Approved by: Nilesh Maharaj, Ph.D.
Laboratory Director

Reviewed by:
X AAA Ara Abramians
Manager, Plant Health Lab

A POSITIVE result means that the named pathogen was detected. A NEGATIVE result does not guarantee that the lot/sample is free of the pathogen. Results relate only to the sample(s) as received and tested. Due to sampling errors and limitations of the methods, the results may not be absolute. Therefore, CSP Labs makes no representation of warranty, expressed or implied, for its testing services or the results issued. Under no circumstances shall the liability of CSP Labs exceed the amount paid for this analysis. For details on strengths or limitations of the methods used for testing please visit our web site www.csplabs.com/disclaimers.php



213929: MultiScan by Culture

Pine: Branches, Pine Needles

Sample Photo

#	Pathogen	Media
1	Non-Selective (Fungal)	TPDA/Blotter
2	Semi-Selective (Fusarium spp.)	KOM
3	Semi-Selective (Verticillium spp.)	NP-10
4	Semi-Selective (Oomycetes)	PAR

**Results**

#	Sample ID	1	2	3	4
1	Sample 1	-	+*	-	-
# of Isolate(s) Sequenced			1		

"+" denotes positive

"- " denotes negative

"*" DNA of isolate(s) sequenced

Comments:

Fusarium sp. was consistently isolated from symptomatic (cankered) stems on semi-selective fungal isolation media (KOM; see #2 in results' table). DNA of the unknown Fusarium was sequenced (ITS regions of fungal ribosomal DNA (rDNA)). Sequence analysis (NCBI Blast analysis) matched with *Fusarium verticillioides* (GenBank accession number MK790042.1 and several others) at 98.17% identity and *Fusarium circinatum* (GenBank accession number KX276637.1 and several others) at 99.79% identity.

The isolated Fusarium was identified as *Fusarium circinatum* based on DNA sequence results and its morphological characteristics.

Fusarium circinatum (teleomorph = *Gibberella circinata*) is the causal agent of pitch canker of pine trees.