

[Cat. No.] **K-6901**

### Introduction

AccuPower® Bursaphelenchus xylophilus Real-time PCR Kit is a ready-to-use premix for real-time PCR that can be used to detect *Bursaphelenchus xylophilus*.

Pine nematodes are parasites in pine trees, white pine trees, and coulter pines. They eat wood and get transferred to other trees by vector insects such as long-horned beetles. After being infected, the parasites will multiply rapidly in a short time, causing the host tree to wither and die. Also, pine nematodes can spread to entire trees in the surrounding forest. Hence, the initial screening of the infected trees is the most crucial step to prevent the spread.

This product contains vacuum-dried components specific to *Bursaphelenchus xylophilus* including DNA polymerase, primers, dNTPs, and reaction buffer required for real-time PCR. This ready-to-use kit simplifies preparation of real-time PCR mixture as the user only has to add template DNA and DEPC-D.W.

### Features & Benefits

- **Convenience & Reproducibility:** All reactants necessary for real-time PCR including primers are lyophilized in each PCR tube, providing reproducible results in a convenient way.
- **Sensitivity:** By applying the patented PyroHotStart (Enzyme-mediated HotStart) technology that minimizes non-specific reactions and maximizes reaction efficiency, only the target gene can be effectively amplified even with a trace amount of template DNA.
- **Stability:** Included stabilizer in the real-time PCR reaction mixture provides increased stability compared to solution-type products.

### Composition

Composition	50 µl reaction
Taq DNA Polymerase	1 U
dNTPs (dATP, dCTP, dGTP, dTTP)	Each 250 µM
Reaction buffer with 1.5 mM MgCl <sub>2</sub>	1X
PWD Forward primer	0.4 µM
PWD Reverse primer	0.4 µM
PWD Probe (FAM)	1 µM

\* **Note:** For research use only. Not for use in diagnostic or therapeutic procedures.

### Specifications

Taq DNA Polymerase	
5'→3' exonuclease activity	Yes
3'→5' exonuclease activity	No
3'-A overhang	Yes

### Storage

Store at -20°C. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

### Online Resources



English

Visit our **product page** for additional information and protocols

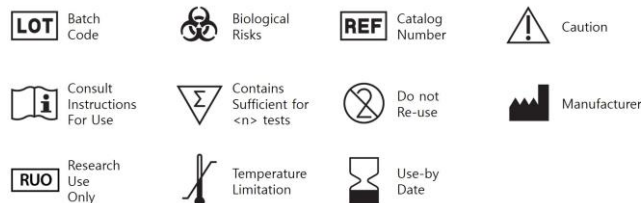
### Ordering Information

Description	Cat. No.
AccuPower® Bursaphelenchus xylophilus Real-time PCR Kit, 0.2 ml thin-wall 8-tube strips with attached cap / 96 tubes	K-6901




### Notice

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### Explanation of Symbols



**Experimental Procedures**

Steps		Procedure Details															
<b>1</b>	 <b>Add template DNA</b>	<p>1. After preparing the template DNA and DEPC-D.W., add the template DNA to the AccuPower® Bursaphelenchus xylophilus Real-time PCR Kit.</p>															
<b>2</b>	 <b>Preparation of reaction mixture</b>	<p>2. Add DEPC-D.W. into PCR tubes to make a total volume of 50 µl. (Do not include the volume of the dried premix in the PCR tubes.)</p> <p>3. Completely dissolve the vacuum-dried pellet by vortexing, and briefly spin down.</p>															
<b>3</b>	 <b>Real-time PCR</b>	<p>4. Place PCR tubes on the Real-Time Quantitative thermal cycler.</p> <p>5. Perform the reaction under the following conditions.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Step</th> <th style="text-align: center;">Temperature</th> <th style="text-align: center;">Time</th> <th style="text-align: center;">Cycles</th> </tr> </thead> <tbody> <tr> <td>Pre-denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">5 min</td> <td style="text-align: center;">1 cycle</td> </tr> <tr> <td>Denaturation</td> <td style="text-align: center;">95°C</td> <td style="text-align: center;">10 sec</td> <td rowspan="2" style="text-align: center;">50 cycles</td> </tr> <tr> <td>Annealing &amp; Extension</td> <td style="text-align: center;">60°C</td> <td style="text-align: center;">20 sec</td> </tr> </tbody> </table> <p>* <b>Note:</b> Users can adjust the protocol according to their instrument and template sequences to get optimal results.</p> <p>6. After the reaction is completed, analyze the results.</p>	Step	Temperature	Time	Cycles	Pre-denaturation	95°C	5 min	1 cycle	Denaturation	95°C	10 sec	50 cycles	Annealing & Extension	60°C	20 sec
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