

PR 610-2

Food Safety Testing Device

IDENTIFY: Chemicals, Biological Agents and Toxic Gases



The PR610-2 food safety testing device

The **PR610-2™** is a flexible, robotic, fluorometric assay system designed and built by Canon Chemical, Inc. under license from Research International. It is used for the high-sensitivity monitoring of food-borne pathogens and their toxins. This unit will automatically perform a user-defined, multi-step, fluoroimmunoassay protocol on 1 to 4 different samples by means of each of the system's four disposable optical waveguide sensors. E. coli O157:H7 has been detected at 100 to 1000 CFU/ml using the PR610-2.

The device uses injection-molded disposable optical waveguide sensing elements, a disposable sample cup and a disposable reagent vial. The waveguides are initially coated with a bioidentification chemistry that targets the pathogen or molecular species of interest. Under cool, dry conditions these coated waveguides can typically be stored for several months.

A computer-controlled cup rotation stage is provided to ensure intimate and complete contact between the sample volume and the waveguide; sensitivity increases of up to 15X have been recorded due to this "active incubation" strategy.

Assays typically take between 11 to 15 minutes per channel. The Windows-based software allows the user to graphically monitor data recovery while an assay is running and provides the user with the ability to customize the various steps involved in running the robotic assay, such as incubation times, buffer flush protocols, or the amount of data to be taken.

For more technical information, please visit www.resrchintl.com.

FEATURES

- Little or no sample preparation
- Pathogen and toxin protocols use standard fluoroimmunoassay reagents
- Assay times 10 –15 minutes
- Assay sensitivities < 1000 CFU/ml
- Sample enrichment can be performed in sample vials to improve detection limits
- Simple to use
- Consistent performance

APPLICATION AREAS

- Food safety
- Medical
- Academic research
- Agriculture
- Bioassay automation

PR610-2 Specifications	
Function	4 channel robotic assay system
Assay type	Biorecognition assay using evanescent-wave fluorescence detection (fluoroimmunoassay typical)
Assay time	Adjustable; 11 min/channel, typical
Sample size	100 μ L to 25 ml, with appropriate sample cup
Spectral range	635 nm solid state laser excitation; 650nm-750nm fluorescence signal detection
Data command and entry	Operates in conjunction with a computer running Windows 2000 or Windows XP
System hardware requirements	PR610-2 instrument, Windows® compatible computer
Consumables	Sample cup, waveguide and reagent vial; buffer supply
Dimensions	13 ¼ in (33.4 cm) W x 11 3/8 in (28.9 cm) D x 10 3/8 in (26.5 cm) H
Power	95 – 260 V, 47 – 63 Hz, ~20 W
Weight	22 lbs (10 kg)
Operating Temperature	10°C – 35°C
Humidity	Non-condensing
<i>Research International reserves the right to change specifications without prior notice.</i>	

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