

ToxinSensor™ Endotoxin Detection Kits FAQs Updated Sep. 1 2010

General Question

1 Which endotoxin detection kit should I use?

After checking factors, such as amounts of protein sample, test frequency, and assay sensitivity, you can select one endotoxin detection kit from GenScript: ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit (Cat. No. L00350) is designed to deliver higher sensitivity (Max Sensitivity: 0.005 EU/ml, or less) quantitative assay, and not used for a 96-well plate assay; ToxinSensor™ Gel clot Endotoxin Assay Kit (Cat. No. L00351) is a semi-quantitative test by running multiple dilutions

of a sample, and shows whether there is less or more than a stated endotoxin level (0.25 EU/ml).

2 What equipment do I need to run my assay?

Different equipments are required if you are running one of our endotoxin detection kits. ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit requires a color spectrophotometer; ToxinSensor™ Gel clot Endotoxin Assay Kit only requires a 37°C water bath, and the visible gel formation is present in final results.

Sample Preparation

3 What pH should I set my sample at? What should I adjust it with?

The pH of the sample should be at pH 6-8 to ensure good linearity.

Consequently, we recommend adjusting pH value using sodium hydroxide (0.1 N, dissolved in LAL reagent water) or hydrochloric acid (0.1 N, dissolved in LAL reagent water) if necessary.

Application

4 What kinds of samples are not compatible with GenScript Endotoxin Assay Kit (Cat. No. L00350 and Cat. No. L00351)?

A: GenScript endotoxin detection kits is not intended to detect endotoxin in the diagnosis of human disease, clinical samples (e.g. blood, serum, antibiotic sample etc.) or blood products, patient management, and cell bacterial culture medium. Also, we recommend using our ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit (Cat. No. L00350) to detect β -glucans samples or samples with contamination by β -glucans, because the β -glucans can interfere non-specific LAL reagents included in ToxinSensor™ Gel Clot LAL Endotoxin Assay Kit (Cat. No. L00351), and cause a false positive result.

5 How to run an assay for endotoxin in medical devices?

Infuse 15 ml of endotoxin-free water into the lumen of medical device (E.g. infusion apparatus, dialysis tubing etc.) and shocks five times, seal all the ends and incubate it at 37°C water bath for 2 hours, then transfer the water to an endotoxin-free vial. Then detect the endotoxin concentration in the water by using ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit (Cat. No. L00350), and the endotoxin value of total endotoxin present in the water can be determined after.

6 Why is it important to vortex Standard Endotoxin dilutions?

Endotoxin will adhere to the surface of glass, however, this problem can be mediated by vortexing. Consequently, the endotoxin standard solution should be vigorously vortexed for 15 minutes prior to making dilutions, and repeat the vortex step each time before using prepared standard endotoxin dilution, not just after reconstitution. Each standard endotoxin dilution should be vortexed for at least one minute prior to using.

7 How to determine the reliability of the final data?

Firstly, we recommend you to prepare all materials included in the kit in a laminar flow cabinet and avoid contamination during assay process. For ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit (Cat. No. L00350), if the coefficient of correlation for the individual absorbance of the standards and the OD value of your sample in the range of the standards. There will be a reliable data after you obtain a good linearity ($|R| > 0.980$).

For ToxinSensor™ Gel clot Endotoxin Assay Kit (Cat. No. L00351), you can obtain the reliability of final data through negative and positive controls. If you get a positive result in the negative control or if you get a negative result in the positive control, it may indicate that the LAL reagent has lost activity.

8 How long must I wait to measure the OD using ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit? How long will the color remain stable using the kit?

In this assay, you can wait 5 minutes to measure the final color after adding Color-stabilizer #3. The color can be stable for 1-2 hours.

9 Why the negative blank shows an increase in OD using ToxinSensor™ Chromogenic LAL Endotoxin Assay Kit (Cat. No. L00350)?

The endotoxin-free materials and the LAL reagent water supplied with the kit (Cat. No. L00350) have a very low endotoxin level (about < 0.0015 EU/ml), furthermore, the Color-stabilizer #3 has a similar color as the final color. Consequently, above factors may result in absorbance in the negative blank.