

# E. COLI O157:H7 LATEX TEST



STATENS  
SERUM  
INSTITUT

*prevents and controls  
infectious diseases,  
biological threats and  
congenital disorders*

- *Identification of E. coli O157:H7*
- *Simple and fast*
- *Result within 10 seconds*



Statens Serum Institut  
SSI Diagnostica  
2 Herredsvejen  
3400 Hillerød  
Denmark

Tel: +45 4829 9178  
Fax: +45 4829 9179  
microbiology@ssi.dk  
www.ssi.dk

## Description

The *E. coli* Latex kit O157:H7 is a fast and simple slide agglutination test for identification of *E. coli* O157:H7 antigens. The kit contains O157 and H7 latex reagents. These are based on latex particles sensitized with highly specific polyclonal O157 antiserum and polyclonal H7 antiserum. The antisera were raised in rabbits and preserved with 0.0975% sodium azide. The O157 and H7 latex reagents are delivered in 1.5 ml and 1.0 ml vials, respectively, sufficient for approximately 75 tests.

## Background

*E. coli* serotype O157:H7 is a verotoxin (VT) producing pathogen which is associated with Hemorrhagic Colitis and Haemolytic Uremic Syndrome in children. *E. coli* serotypes other than O157:H7 also produce VT, however the diarrhoea is usually non-bloody. This *E. coli* bacteria occurs naturally in the intestines of healthy cattle. Outbreaks can be caused by eating undercooked ground beef or by drinking unpasteurized milk. Identification of the verotoxin producing pathogen provides important information for the optimal treatment of the patient.

## Procedure

### O157 Latex test:

The clinical specimen is grown overnight on a Sorbitol MacConkey agar plate or any other *E. coli* selective agar plate. The colonies are suspended in 0.9% NaCl and mixed with the *E. coli* O157 latex reagent. The latex agglutination test is performed as follows:

1. One droplet (10 µl) of bacterial suspension is placed on a plastic or glass slide.
2. One droplet (10 µl) of latex suspension is placed on the slide beside the bacterial drop.
3. The two suspensions are mixed and the slide is rocked for 5-10 seconds.

A positive reaction is indicated by an agglutination appearing within 5 to 10 seconds. False positive reactions may occur if the time exceeds 20 seconds.

### H7 latex test:

In case of a positive agglutination with O157 latex the primary screening of H7 can be performed with Latex H7. The procedure is the same as described above but an overnight serum broth culture is used as the bacterial suspension instead.

The presence of H7 should be confirmed by serotyping with monospecific H7 antiserum.

## Limitations

The *E. coli* Latex Test is intended to be used on pure cultures of *E. coli* grown in a serum broth, on a Sorbitol MacConkey agar plate or another *E. coli* selective agar plate. Sorbitol MacConkey agar medium is recommended to be used as the primary screening step for detection of the O157:H7 serotype prior to use of the *E. coli* Latex kit O157:H7.

## Storage and shelf life

The products should be kept in a dark place at 2-8°C. The expiry date is printed on the package.

## Available products

Art. No. 73412 *E. coli* Latex O157

Art. No. 77645 *E. coli* Latex kit O157:H7

## Ordering and Information

Statens Serum Institut

SSI Diagnostica

2 Herredsvejen

3400 Hillerød

Denmark

Tel.: +45 4829 9178

Fax: +45 4829 9179

microbiology@ssi.dk (inquiries)

ivdorders@ssi.dk (orders)

www.ssi.dk

