



**STATENS  
SERUM  
INSTITUT**

prevention and control  
of infectious diseases  
and congenital disorders

## *E. COLI* F ANTISERA

for *in vitro* diagnostic use

### Application

The *E. coli* antisera F4 and F5 from Statens Serum Institut are intended for typing of flagella antigens by agglutination.

### Description

The *E. coli* antisera are raised in rabbits. The antisera are supplied in 5 mL bottles (sodium azide as preservation).

Cross-reactions have been removed by absorption when necessary.

### Principle

When a bacterial culture is mixed with a specific antiserum directed against bacterial surface components, the cells are bound together through antigen-antibody bonds to form aggregates (agglutination).

This is usually visible to the naked eye as clumps in the suspension.

### Material required but not provided

Agar medium (e.g. beef extract agar)  
Minca IS agar plates (IS = Iso Vitalex)  
Inoculating loop or toothpick  
Pipettes  
Glass slides  
Physiological saline, pH 7.4  
An incubator set at 37°C

### Procedure

#### General

Physiological saline is used as a negative control and must be negative.

If the negative control is positive (agglutinates), the strain is auto agglutinating.

#### Slide agglutination with F antisera

1. The *E. coli* is grown over night at 37°C on a suitable agar medium not inhibiting motility and on a Minca IS agar plate (F5 antiserum works only on colonies grown on this special medium).
2. Apply a small drop of antiserum (approximately 20 µl) on a glass slide.
3. Transfer culture from a single colony to each drop of antiserum and mix well. The amount of culture should be sufficient to give a distinct milky turbidity. Use an inoculating loop or a toothpick.
4. Tilt the slide for **5 - 10 seconds**.

5. The reaction is read with the naked eye by holding the slide in front of a light source against a black background (indirect illumination).
6. A positive reaction is seen as a visible agglutination. A negative reaction is persistence of the homogeneous milky turbidity. A late or weak agglutination should be considered negative.

### Storage and shelf life

Store at 2-8°C in a dark place. Expiry date is printed on the package.

Turbidity due to lipoprotein precipitation is sometimes seen after prolonged storage. Precipitation and/or contamination can be removed by centrifugation (10,000g) followed by sterile filtration (0.22 µm).

### Typing support

*E. coli* strains which cannot be typed, may be sent to The International Escherichia Centre (WHO), 5 Artillerivej, 2300 Copenhagen S, Denmark for further examination. Please enquire about the charges.



QUALITY SYSTEM  
DS/EN ISO 9001  
DS/EN ISO 13485

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