

# PNEUMOCOCCUS



STATENS  
SERUM  
INSTITUT

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

- **Rapid**
- **Easy**
- **Reliable**
- **Flexible**

**PNEUMOCOCCAL ANTISERA**  
FOR IN VITRO DIAGNOSTIC USE



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### Pneumococcal antisera

For *in vitro* diagnostic use

#### ■ Rapid

A single capsular reaction test is performed in less than one minute.

#### ■ Easy

A simple procedure with ready-to-use solutions based on standard laboratory equipment.

#### ■ Reliable

Many years of experience guarantee a high standard of diagnostic performance.

#### ■ Flexible

With this collection of antisera partial as well as complete typing of all known pneumococci can be obtained.

Since the 1940's the Streptococcus Unit at Statens Serum Institut has manufactured diagnostic pneumococcal antisera.

Pneumococcal antisera from Statens Serum Institut are used by medical centres and vaccine industries all over the world for typing of pneumococci and as in-process control.

### Application

Pneumococcal diagnostic antisera are intended for identification and typing of pneumococci by means of the capsular reaction test.

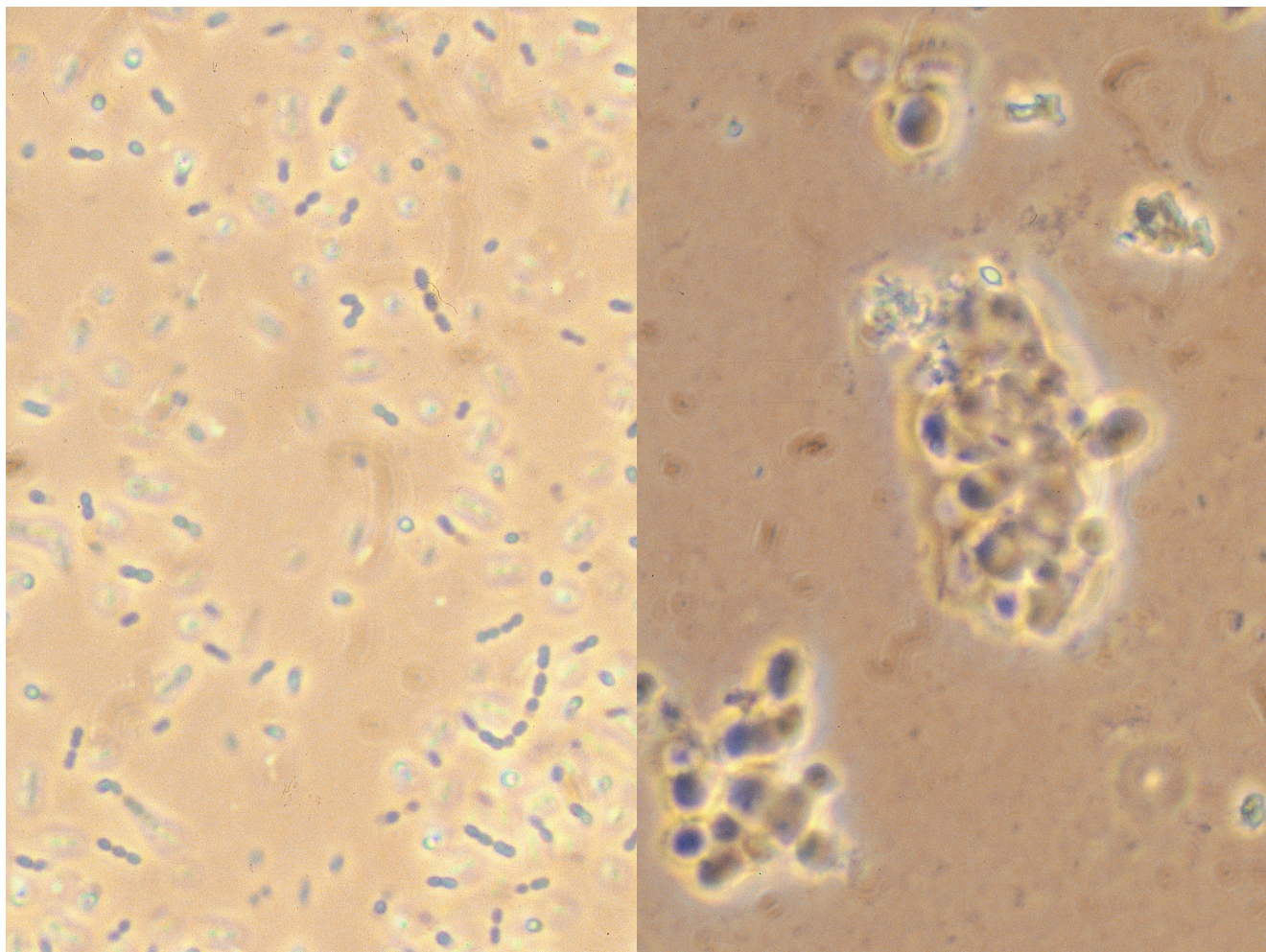
This is a fast and easy-to-perform method that requires only standard microbiological equipment.

Pneumococcal diagnostic antisera can be used for:

1. Identification of *Streptococcus pneumoniae*.
2. Complete typing of all known pneumococci.
3. Typing of only the most dominant or important types (e.g. one of the 23 vaccine types).
4. Partial typing of one or several pneumococci.

All pneumococcal diagnostic antisera from Statens Serum Institut can be used alone or combined, depending on the aim of the study.

Apart from the capsular reaction test, SSI's pneumococcal antisera are used by microbiologists in various methods such as latex agglutination, coagglutination and counterimmunoelectrophoresis.



### Description

Statens Serum Institut manufactures ready-to-use pneumococcal antisera with different specificity.

The antisera are raised in rabbits against the pneumococcal capsular polysaccharides.

All the diagnostic antisera are delivered in vials containing 1 ml each (approx. 300 tests). Larger quantities are available upon request.

The antisera are preserved with 15 mM (0,0975%) sodium azide.

### Omni serum

This antiserum contains antibodies to all known pneumococcal types. It can be used directly on e.g. CSF or blood for identification purposes.

Titer: 4 when used in the capsular reaction test.

### Pool sera

14 different pooled sera each reacting with 8-14 types. Pools A→I cover all 90 different types. The Pools P→T cover the 21 types and/or groups present in the 23-valent pneumococcal vaccine.

Titer: 8 when used in the capsular reaction test.

### Group sera

21 different group sera each reacting with all the types within a group.

Titer: 16 when used in the capsular reaction test.

### Type sera

25 different type sera each reacting with 1 type.

Titer: 16 when used in the capsular reaction test.

### Factor sera

65 different factor sera used to identify the different types within a specific group.

Titer: 4 when used in the capsular reaction test.

### Pneumotest

Collection of pneumococcal pool antisera intended for typing and/or grouping of 90-95% of the pneumococci most commonly isolated from blood and CSF.

One kit consists of 12 pooled sera (A→F, H and P→T), and can be ordered with or without a positive control (lyophilized Type 1 culture and its homologous Type serum 1).

### Anti C-polysaccharide serum

This antiserum contains antibodies that have been raised in rabbits against the cell wall polysaccharide common to all pneumococci. It can be used to identify especially noncapsulated pneumococcal strains.

Titer: 16 when used in the capsular reaction test.

The flexibility of the product assortment ensures that the user's requirements for typing are always covered with a minimum of tests.

Based on the close collaboration between the departments for diagnostics, epidemiology and production at Statens Serum Institut, the product assortment is always up-to-date.

### Specificity

In pool, type and group sera the cross reactions are eliminated by absorption. In factor sera, cross reactions within the group are eliminated by absorption.

### Procedure

The capsular reaction test is performed as follows:

1. Mix bacterial suspension and antiserum on a glass slide.
2. Place cover slip on top of the mixture.
3. Observe the mixture in a phase contrast microscope with an oil immersion lens.

If the capsule becomes visible the reaction is positive (see illustration). A positive reaction is the result of an in situ immunoprecipitation, leading to a change in the refractive index. In addition the bacteria agglutinate.

### Limitations

Diagnostic pneumococcal antisera from Statens Serum Institut are intended for the diagnosis of pure cultures of capsulated pneumococci only.

### Storage and shelf life

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

### Typing support

Pneumococcal strains which can not be typed with any of these antisera may be sent to Statens Serum Institut for further examination.



### Information and ordering

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