

for *in vitro* diagnostic use**Application**

The Latex Pool Antisera are ready-to-use for serotyping and/or grouping of pneumococci.

Description

The Latex Pool Antisera contain a bottle with latex particles coated with pneumococcal antiserum raised in rabbits (0.0975 % sodium azide as preservation). Crossreactions have been removed by absorption. The Latex Pool Antisera contain reagent for approximately 75 tests.

Principle

The Latex Pool Antisera (A to I and P to T) provide a rapid latex agglutination test for serotyping and/or grouping of *Streptococcus pneumoniae*.

Limitations

Latex Pool Antisera are intended for the serotyping of pure cultures of capsulated pneumococci.

Materials required but not provided

- Phosphate buffered saline (pH 7.4) for negative control
- Todd-Hewitt broth (Difco, Oxoid CM189, Sigma T-1438)
- Pipette or any other utility that can make a droplet of approximately 10 µL
- Mixing stick - Disposable reaction cards (200 pcs., art. no. 53285)

or

- Phosphate buffered saline (pH 7.4)
- 5 - 10 % blood agar plate
- 1 µL loop
- Disposable reaction cards (200 pcs., art. no. 53285)

Procedure

Do not perform more than 3 reactions simultaneously before reading the result.

1. Use an overnight Todd-Hewitt broth culture showing visible growth or a 5 - 10 % blood agar plate.
2. Before use of the latex reagent it is **very important** to bring the bottles to **room** temperature and shake.
3. For each reaction add one drop (approximately 10 µL, squeeze the bottle gently) of latex suspension in a circle on the reaction card.

4.	Todd-Hewitt broth culture	5 - 10 % blood agar culture
	Apply one drop (approximately 10 µL) bacterial suspension next to the drop of latex suspension.	Apply 10 µL phosphate buffered saline next to the drop of latex and suspend 1 colony from the agar plate in the drop of saline ¹
		¹ it is very important not to isolate too much colony material or material from the agar plate since this might give false positive reactions.

5. Mix the two drops with a mixing stick. Use a separate stick for each reaction.
6. Spread to cover the area of the circle.
7. Rock the card slowly and observe for agglutination within 5 - 10 seconds. Any agglutination after 30 seconds is not a positive reaction.
8. Test of additional Latex Pool Antisera makes it possible to determine the type or group using the chessboard.

Pool	P	Q	R	S	T	Non-vaccine groups/types
A	1	18 (18F, 18A, 18B, 18C)	4	5	2	
B	19 (19F, 19A, 19B, 19C)	6 (6A, 6B, 6C)	3	8		
C	7 (7F, 7A, 7B, 7C)				20	24 (24F, 24A, 24B) 31, 40
D			9 (9A, 9L, 9N, 9V)		11 (11F, 11A, 11B, 11C, 11D)	16 (16F, 16A) 36, 37
E			12 (12F, 12A, 12B)	10 (10F, 10A, 10B, 10C)	33 (33F, 33A, 33B, 33C, 33D)	21, 39
F				17 (17F, 17A)	22 (22F, 22A)	27 32 (32F, 32A) 41 (41F, 41A)
G						29, 34 35 (35F, 35A, 35B 35C) 42 47 (47F, 47A)
H	14	23 (23F, 23A, 23B)		15 15F, 15A, 15B, 15C)		13 28 (28F, 28A)
I						25 (25F, 25A) 38, 43, 44, 45, 46, 48

Boldface indicates that the group/type is included in the 23-valent pneumococcal vaccine. () states types within a group.

Typing support

If an optochin-sensitive *S. pneumoniae* does not give agglutination in any of the latex pool sera, the strain may be sent to Statens Serum Institut, 5, Orestads Boulevard, DK-2300 Copenhagen S, Denmark for further examination.

Storage and shelf life

Store at 2 - 8°C in a dark place. Expiry date is printed on the package. Do not freeze (if the reagents have accidentally been frozen, they should not be used).

References

Slotved, H-C. et al., Journal of Clinical Microbiology, 42(6):2518-2522, 2004
Slotved, H-C., Kernn, M.B., Journal of Microbiological Methods, 61:181-186, 2005
Reynolds, R., Journal of Antimicrobial Chemotherapy 62(suppl. 2):ii15-ii28, 2008

Information and ordering

SSI Diagnostica
2 Herredsvejen
DK-3400 Hillerød
Denmark
T +45 4829 9178
F +45 4829 9179
@ ivdorders@ssi.dk (ordering)
@ microbiology@ssi.dk (inquiries)
w ssi.dk / shop.ssi.dk

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