

S. PNEUMOSTRIP

*Detection and serotyping of 76
Streptococcus pneumoniae serotypes*



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Test for the detection and identification of **76 serotypes** of *Streptococcus pneumoniae*

Infections of *S. pneumoniae* represent an important public health problem in both industrialized nations as well as in those that are less-developed. It is responsible for high mortality and lethality, as it is one of the main causative agents for a large variety of clinical conditions, from benign infections, like otitis media and acute sinusitis, to more severe infections, such as septicaemia, meningitis and pneumonia.

Among the interesting structures of this bacteria is a capsule outside the cell wall, made of complex polysaccharides. This capsule protects the bacterium from phagocytosis and is essential to its virulence. In fact, the non-encapsulated forms of the bacteria are, normally, not virulent. The antigenic composition of the capsule is variable between the various strains and allows *S. pneumoniae* to be grouped into over 100 different capsular serotypes and approximately 45 serogroups. Serotypes that present cross-immunogenicity are considered to belong to the same serogroups.

The World Health Organization has encouraged countries to conduct appropriate surveillances for monitoring the impact of vaccination and in order to assess vaccines strategies. Thus, the serotyping of *S. pneumoniae* is important from a clinical and an epidemiological point of view.

The identification of each serotype is usually made using an antigen-antibody reaction with specific antisera, which results in swelling of the capsule, a phenomenon known as “Quellung”, a German term that means swelling. This method remains as the gold standard, but it is a complex, long and laborious method that requires trained stuff, and its use is therefore restricted to qualified laboratories.

The S. PneumoStrip kit is the only test that allows the easy, quick and single identification of 76 different serotypes of *S. pneumoniae* in DNA samples, extracted from bacterial culture. Among the detected serotypes are the 23 included in the most common vaccines available.

Procedure

DNA sample extraction

PCR*

Hybridization protocol

* Oopen kits include all the necessary reagents even Taq polymerase.

Just like all our products from the Oopen line based on reverse hybridization, S.PneumoStrip test can be performed both manually or automatically, and the kit includes all necessary reagents and internal controls ready for use.

Results

