



INSTRUCTION FOR USE

SIRscan® Discs ID

Optochin 5µg



Réf : FP-0007
Validé : 10/04/18

For the identification of *Streptococcus pneumoniae*.

FOR IN VITRO DIAGNOSTIC USE ONLY

INTRODUCTION

Streptococci producing partial (alpha) haemolysis on blood agar are divided into two groups: *Streptococcus viridans* and *Streptococcus pneumoniae*.

The large and more heterogeneous group *Streptococcus viridans* lead a predominantly commensal existence although they do play a pathogenic role in subacute bacterial endocarditis in patients with predisposing lesions. *Streptococcus pneumoniae* (pneumococci) have a much greater clinical significance, its members being the causative organisms in lobar pneumoniae and other diseases. It is therefore of great importance to differentiate between the two groups.

Bowers and Jefferies¹ showed that most strains of *Streptococcus pneumoniae* are sensitive to optochin (ethylhydrocuprein hydrochloride). Use of optochin as a specific inhibiting agent for *Streptococcus pneumoniae* was also confirmed by Bowen et al.².

PACKAGING

SIRscan® Discs ID Optochin are furnished by 1 cartridge or by 5 sealed bags of 1 cartridge. A cartridge contains 50 discs.

DESCRIPTION

SIRscan® Discs ID Optochin are filter paper discs impregnated with 5µg optochin. Each disc is printed with the code OP5 on both sides for easy identification

STORAGE

Store at 2 to 8°C in the containers provided until the expiry date shown on the pack label. Allow to equilibrate to room temperature before opening.

PRECAUTIONS

For *in vitro* diagnostic use only.
Observe approved biohazard precautions and aseptic techniques.
To be used only by adequately trained and qualified laboratory personnel.
Sterilise all biohazard waste before disposal.

MATERIAL REQUIRED BUT NOT PROVIDED

Standard microbiological supplies and equipment such as loops, culture media, swabs, applicator sticks, incinerators and incubators ...

PROCEDURE

1. Heavily inoculate a blood agar plate with the test alpha haemolytic streptococci.
2. Place a SIRSCAN® ID Disc Optochin on to the inoculated medium.
3. Alternatively several strains may be radially streaked onto a plate, the disc being placed in the center allowing a standard sensitive organism to be used for comparison.
4. Incubate for 18 to 24 hours at 37°C in 10% CO₂.

INTERPRETATION OF RESULTS

A clearly defined zone of inhibition of growth of greater or equal to 14mm diameter around the disc or along a stroke of growth indicates that the test organism is *Streptococcus pneumoniae*.





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A SIRSCAN® ID Discs Optochin placed upon a primary culture from a sputum or pus specimen is particularly useful giving an indication of the presence of pneumococci by diminution of growth around the disc.

QUALITY CONTROL

Check for signs of deterioration. Quality control must be performed with at least one organism to demonstrate a positive reaction and at least one organism to demonstrate a negative reaction. Do not use the product if the reactions with the control organisms are incorrect.

The list below illustrates a range of performance control strains which the end user can easily obtain.

Test Organisms	Result
<i>Streptococcus pneumoniae</i> ATCC 6305	≥ 14mm
<i>Streptococcus pyogenes</i> ATCC 19615	No zone

LIMITATIONS

It is recommended that biochemical and/or serological tests are performed on colonies from pure culture to confirm identification.

Approximately 4 to 5% pneumococci are optochin resistant.

REFERENCES

1 - Bowers EF, Jeffries LR. Optochin in the identification of *Str. pneumoniae*. J Clin Pathol. 1955 Feb;8(1):58–60

2 – Bowen M K, Thiele L C, Stearman B D, Schaub I G. The optochin sensitivity test: a reliable method for identification of pneumococci. J Lab Clin Med. 1957;49:641–642

