

## OPKA assay plate colony counting

The opsonophagocytic killing assay (OPKA) is a useful addition to the pneumococcal antibody enzyme-linked immunosorbent assay (ELISA). The in-vitro OPKA for pneumococcal antibodies should predict immune protection and be a good surrogate assay for immune protection induced by the vaccine.

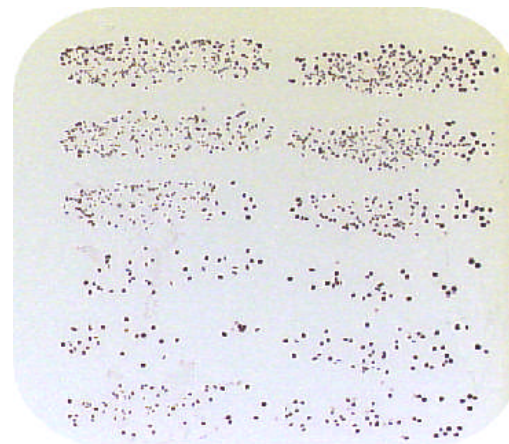
### Applications

The OPKA is commonly used for evaluating pneumococcal vaccines and for measuring antibody function. ProtoCOL produces results from OPKA which are compliant with GLP guidelines.

### Visualization

Plates are illuminated either from below or using reflected and/or transmitted light.

The ProtoCOL uses a unique combination of red, green and blue light to illuminate plates.



**Figure 1- OPKA analysis plate.**

*Streptococcus pneumoniae* were plated on to Todd Hewitt agar with an overlay containing 2,3,5-triphenyltetrazolium chloride (TTC) and antibiotic. The plate was incubated for 12-18 hours at 37°C. The plate was then imaged using reflected light and a black background.

	Lighting	Background
Light colonies	Reflected light	Black
Dark colonies	Reflected light and illumination from below	White

**Table 1 - Recommended lighting and background selection for counting colonies on the ProtoCOL system**

**N.B.** If there is writing on the bottom of the plate then using a black background is preferable

### Counting

ProtoCOL will classify plates by colour so it is possible to count colonies of different colours. If Todd Hewitt agar is used red colonies will be present on the plate as illustrated in Figure 1.

**Synbiosis reserves the right to amend or change specifications without prior notice. This Application note supersedes all earlier versions.**

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