SRD plate zone counting

The single radial diffusion (SRD) test is a commonly used technique in the pharmaceutical industry for determining vaccine potency. The SRD test provides a quantitative method for determining the concentration of the antigen present in the test sample.

Applications

The SRD test has various applications including vaccine production for testing vaccine potency, in clinical laboratories for the determination of immunoglobulin levels in patient samples.

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.

	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

With ProtoCOL software it is possible to accurately identify precipitin rings and measure the diameter of these rings generating precipitin ring size results. The diameter of the precipitin ring is proportional to the concentration of the antigen present in the test sample.

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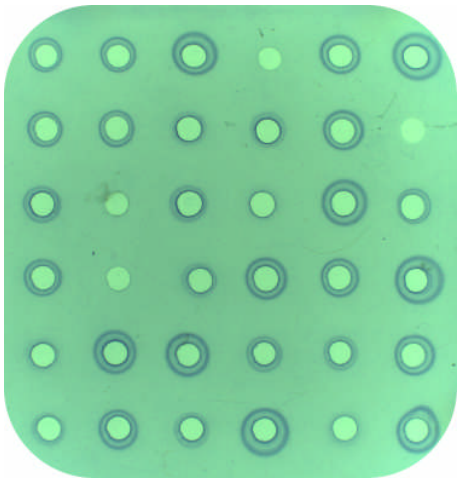

Figure 1- SRD plate
Antibody was incorporated in to a thin agar gel containing sodium chloride (pH7.2). This was then followed by the addition of antigen into formed wells of the antibody containing agar. The plate was incubated at room temperature for 48-72 hours. This plate was imaged using reflected light and illumination from below with a white background.

16.07.09

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