



Standard Operating Procedure

ANTIBIOTIC ZONE READER

Make/Model: Rolex Scientific Engineers, Ambala, Haryana

Location: Pharmaceutical Microbiology Lab 3

SOP Number:

Prepared date:

Review date:

PURPOSE:

Antibiotic zone reader is used to measure the size of zone of inhibition or exhibition in microbiological assays of antibiotics and vitamins.

PROCEDURE:

1. Ensure that the instrument is clean and free from dust.
2. Connect the main cord to the supply socket and switch it on.
3. After fixing the prism at the rough side in mirror reflects the light side position.
4. Turn the left side drum to its maximum clockwise position, so that zero marking on the scale of the right side drum coincides with the zero marking on the vernier scale.
5. Keep the petri dish on the top belt and rotate it manually so that one end of the zone image just touches the mark line on the prism.
6. Now turn the left side drum slowly in anticlockwise position till the other end of the zone image touches the mark line on the prism
7. Note the reading directly on the right side drum scale. The scale is marked from 0 to 35 mm with each division of 0.2 mm and the vernier scale is marked with each division of 0.02 mm.
8. Switch off the mains and keep the instrument under cover when not in use.

CALIBRATION:

- Mark the diameter of the Acrylic disc by drawing the line.
- Measure the diameter of Acrylic discs having the diameter of i) 18 mm, ii) 20 mm, iii) 25 mm with the calibrated vernier and note the reading.
- While measuring the diameter, measure along the line of diameter by vernier and by Antibiotic zone reader.
- Switch on the main switch on the zone reader.
- Turn the right side knob in such a way that the fixed vernier scale matches with the rotating scale at '0'.



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- Keep the earlier measured disc in the Petri plate. Keep the plate on the stage. Adjust the plate such that, point where diameter line intercepts circumference of the disc, touches the marked line of the view glass.
- Rotate the right side knob in the clockwise direction so that the opposite side's point of interception of the circumference of disc touches marked the line of the view glass.
- Note down the readings from the rotating scale.
- Likewise measure three discs of each of different diameter, which is previously measured with calibrated vernier calipers.
- Find out the difference. The difference should not be more than ± 0.2 mm

CLEANING & MAINTENANCE:

- Clean with a non-shedding duster dipped in the disinfectant solution, the outer surfaces of the antibiotic zone reader daily.
- The instrument should be handled properly.
- The light source should not be kept on for a long period of time.
- The lens from which light is reflected should be clean and free from dust.



ANTIBIOTIC ZONE READER

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