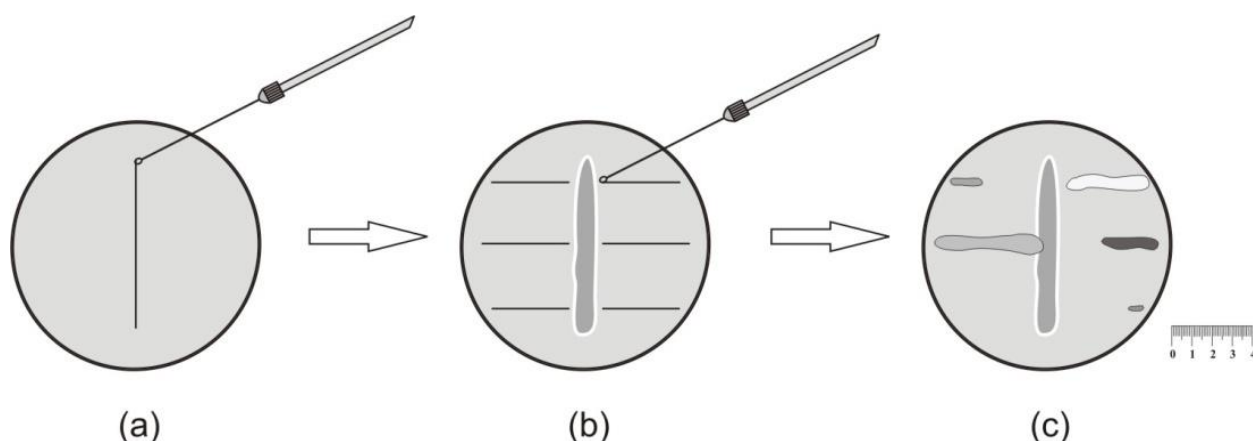


Exp.6: Detection of Antagonism between Microbes Using Cross Streaking

The detection of antagonism in cross-streak experiments is also possible



Detection of antagonism in cross-streak experiments. (a) Line-inoculation of the antibiotic producer strain onto the nutrient Petri plate. (b) Inoculation of the test organisms with cross-streak method just near the producer microorganism. (c) Measurement of the inhibition distance after the incubation period.

Object of study, test organisms:

Penicillium chrysogenum (antibiotic producer strain)

Escherichia coli slant culture

Bacillus cereus slant culture

Micrococcus luteus slant culture

Serratia marcescens slant culture

Staphylococcus aureus slant culture

Unknown bacterial strain slant culture

Materials and equipment:

Nutrient plate, inoculating loop, Bunsen burner and incubator

Practice:

1. Inoculate the antibiotic-producer strain onto the centre of a nutrient plate with line-inoculation.
2. Incubate at 28°C for one week.
3. Inoculate the test organisms with the cross-streak method near the antibiotic-producer microorganism (do not touch the *Penicillium* colony at inoculation).
4. Incubate at 28°C for one week.
5. The antimicrobial effect can be determined by measuring the inhibition distance.