

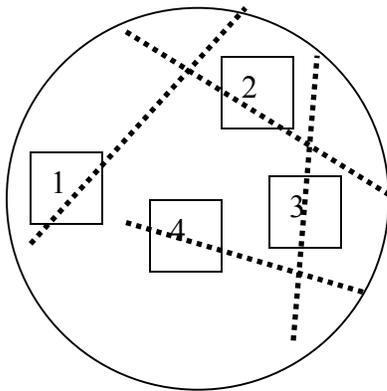
Streak Plate Method of Isolation

Purpose The streak plate technique is the most widely used method of obtaining isolated colonies from a mix of cultures.

Principle The streak plate technique is essentially a method to dilute the number of organisms, decreasing the density. This allows for individual colonies to be isolated from other colonies. Each colony is considered "pure," since theoretically, the colony began with an individual cell.

Additional Information (see also p. 53 in the lab text for diagrams.)

1. Begin by mapping out the 4 quadrants of your plate. Label them 1, 2, 3, and 4.



2. Begin with inoculating the first, or primary, quadrant of the agar plate. Use a light touch. Don't penetrate or scrape the agar surface. Cover plate with lid.
3. Flame the loop, cool by touching an uninoculated portion of the surface.
4. Now rotate the plate. Open lid and streak again, following the diagram in the exercise book. Remember: you are picking up growth from quadrant one, and using this as your inoculum for quadrant two.
5. Flame loop; rotate plate, and repeat procedure for quadrants three and four. The proper wrist action and light touch takes practice.



This is an example of a good streak for isolation using the "four corners" method. The small colonies here are of Staphylococcus epidermidis.



This is not a great streak plate but it is serviceable, as there are a few isolated colonies. This plate would have been better if the loop had been flamed between each sector.



This is an example of how NOT to streak for isolation. Scribbling is not streaking, and most likely will not result in isolated colonies.

The proper technique is designed to thin out the individual cells from the original inoculum so that an individual cell can develop into an isolated colony of daughter cells.