

Starch, Lipid, Gelatin Hydrolysis

Starch Test

The organism on the left is negative for amylase, no clear zone indicates no starch hydrolysis. The organism on the right is positive for amylase, a clear zone indicates starch hydrolysis.



Lipid (fat agar plate) Test

Lipase splits triglycerides into glycerol and fatty acids. When the fatty acids are separated from glycerol they become acidic. The neutral red pH indicator turns red with acid. The organism on the left is negative for lipase, no red fat droplets. *Staph. aureus* has produced red fat droplets indicating the presence of lipase.



Gelatin Test

Gelatinase is protease that cleaves gelatin (a protein) into amino acids. Intact proteins form a gel. Amino acids do not gel. The organism on the bottom is positive for gelatinase and has hydrolysed the gelatin forming a liquid. The organism on the top is negative. After incubation, the tubes are typically refrigerated. Unhydrolysed gelatin is solid, hydrolysed gelatin remains liquid in the cold.

