

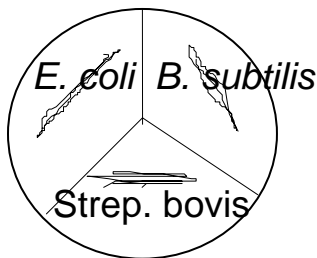
## Microbiology Lab Experiment Changes

**Experiment #:** 5-11, 5-14, 5-16

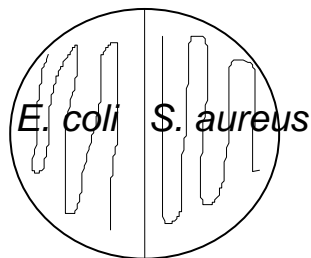
**Title:** Starch, Lipid, Gelatin Hydrolysis

**Live Organisms:** *E. coli*, *Bacillus subtilis*, *Bacillus cereus*, *Streptococcus bovis*, *S. aureus*

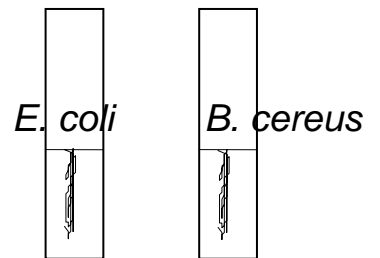
**Changes:** Procedure: work in groups  
1. Inoculate media as follows:



Starch plate



Fat plate



Gelatin tubes

Other bacteria may also be used. The inoculations above are the minimum requirements.

Note: We are using Neutral Red Fat Agar plates instead of Tributyrin Agar for lipid hydrolysis.

2. After incubation, flood starch plate with iodine and refrigerate gelatin tubes. On starch plates, starch turns blue-black upon addition of iodine. Look for clear or colorless zones around bacterial growth. After refrigeration, tilt gelatin tubes and observe any liquid gelatin.

**Take Home Lesson:** See chart on handout. You need to know the substrate, type of enzyme, what enzyme is involved, the product for which the test is being performed and positive and negative test results.