Catalase
Tests for the presence of the enzyme catalase.

Intended Use:
- Differentiates Streptococcus (-) from Micrococcus (+)
- Differentiates Staphylococcus (V+) and Bacillus (+) from Clostridium (-)

Principle:
Hydrogen peroxide (H_2O_2) is the end product of aerobic breakdown of sugars. Since it is toxic to bacterial cells, most aerobic bacteria produce catalase or peroxidase to protect themselves. Streptococcus, Enterococcus, and Lactobacillis are exceptions. Since they do not use the cytochrome c pathway, they do not produce H_2O_2 and lack catalase.

Test Procedure:
1. Transfer a well isolated colony to a clean glass slide and add 1 drop of 3% H_2O_2.
   - Do not reverse the order and do not mix.
2. Observe for immediate bubble formation.
3. Use 15% H_2O_2 for the detection of catalase in anaerobes.

Results:
- The formation of bubbles is considered a positive result.

Limitations:
- Do not take your colony from a blood agar plate. The catalase present in the erythrocytes will give a false positive result.
- H_2O_2 is unstable. You can do a quality control test of the H_2O_2 reagent by placing a drop on a blood agar plate. Vigorous bubbling should result.