Proc.# **2013.002**

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| Procedure | **Catalase Test** |

**1. Purpose:** The Catalase test is used to differentiate between bacteria that possess the enzyme catalase. The enzyme catalase catalyzes the liberation of water and oxygen from hydrogen peroxide, a metabolic endproduct toxic to bacteria.

1. **Scope:** This is a screening test only. The catalase test is primarily used to differentiate between Staphylococci & Streptococci. It is also useful in differentiating *Listeria monocytogenes* from beta hemolytic streptococci. Most Neisseria species are also positive as well as *Moraxella catarrhalis.*
2. **Procedure:**

Preparation and Notes

* Specimen and specimen handling if other than routine: Pure growth from primary or sub-culture plate.
* Equipment: N/A
* Materials: Glass slide, Bacti loop, Hydrogen peroxide, & transfer pipette.
* Controls: *Staph. aureus* & Group D Strep. are run each day of use and documented in the QC log book.
  1. Procedural Steps:
     1. With a loop or sterile wooden stick, transfer a small amount of pure growth from the primary or sub-culture plate onto the surface of a clean, dry slide.
     2. Immediately place a drop of 3% hydrogen peroxide onto a portion of a colony on the slide.
     3. Observe for the evolution of bubbles of gas, indicating a positive test.

1. **References:** Bailey and Scott’s Diagnostic Microbiology, pg. 111, Seventh Edition 1986 Manual of ClinicalMicrobiology , pg. 1666, Seventh Edition 1999.

**5. Definitions/Limitations**: None

**Reference ranges:** Positive or negative

**Limitations:** Enterococcus faecalis can yield a weak reaction. Also red blood cells from the agar can produce a false positive. Positive tests produce very vigorous bubbles, E. faecalis produces a weak reaction that should not be noted as positive reaction.

**6. Measurements and Records:** The record of this test is documented on the bacteriology worksheet.

**Calculations:** N/A

**Reporting Results:** Results are not reported on a patients chart. Except in the rare occasion when “Coagulase Neg. Staph” I is reported and no further work-up is deemed necessary by technologist/physician.

**Records to be completed:**

**7. Attachments:**

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