

## **K980100 CATALASE 15%**

## **K980101 CATALASE 30%**

## **K980102 CATALASE 3%**

### **DISCUSSION:**

A Catalase test is useful for the identification of many different bacteria. Since Streptococci lack the enzyme to catalyze hydrogen peroxide, and all Staphylococci possess it, 3% Catalase is used to separate the species. Also, *Listeria monocytogenes*, which is catalase positive can be differentiated from beta-hemolytic Streptococci. Most *Neisseria* species are catalase positive. 15% Catalase is used for anaerobes, with most anaerobes being catalase negative with the exceptions of several species in the *B. fragilis* group and a few of the anaerobic cocci. 30% Catalase is used with acid fast bacilli.

### **MATERIALS REQUIRED:**

- Clean slides
- Loop or sticks to make smear.

Consult your procedure for material required for use of 30% catalase with acid fast bacilli. Catalase tests require preliminary growth on appropriate media. Consult a reference such as the Manual of Clinical Microbiology for recommendations.

### **LIMITATIONS/PRECAUTIONS:**

It is recommended that catalase testing be done from media not containing blood. If this is not possible, be careful when picking colonies to pick up only organism, not digging into the agar as red blood cells do contain catalase and could cause a false positive. If you are not certain of your result, you may confirm by placing a small smear of agar only on the slide next to your organism smear. The agar alone should produce a much weaker reaction.

### **INSTRUCTIONS:**

1. To use 3% and 15%, make a smear of the organism being tested on a clean slide.
2. Add 1 drop of catalase reagent and observe for the immediate formation of bubbles.
3. To use 30%, consult your laboratory's procedure for the specific property for which you are testing.

### **QUALITY CONTROL:**

Positive and Negative controls should be run daily. Use quality control organism appropriate to the strength catalase you are using. For 3% Catalase, Key recommends *Staphylococcus aureus* ATCC 25923 for positive controls and *Streptococcus pyogenes* ATCC 19615 or *Streptococcus agalactiae* ATCC 13813 for negative control.

### **STORAGE:**

Store tightly closed at 2-8°C protected from freezing temperatures.

### **REFERENCES:**

- (1) Bailey and Scott's Diagnostic Microbiology, 8th Edition. Chapters 26 & 28.
- (2) Manual of Clinical Microbiology, 5th Edition, Chapters 30 & 41.



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