

1. The reagents used in the oxidase test have been shown to auto-oxidize, so it is very important to use fresh reagents, no older than 1 week.
2. Both bacteria and yeast grown on media containing high concentrations of glucose show inhibited oxidase activity, so it is recommended to test colonies grown on media without excess sugar, such as nutrient agar. Tryptic soy agar is also an excellent media.
3. Bacteria grown on media containing dyes may give aberrant results.
4. The test reagents will effectively kill the microorganisms, so sub-culturing should be done prior to adding any reagent to an active culture.
5. The oxidase test can be used in the presumptive identification of *Neisseria* and in the differentiation and identification of gram-negative bacilli. Oxidase-positive organisms should be examined by gram stain to determine morphology and gram reaction. Additional biochemical tests are recommended for complete identification.
6. Use of a nichrome or other iron containing loop may yield false-positive reactions. Platinum loops are recommended.
7. Most *Haemophilus* are oxidase-positive. Less sensitive strips or reagents may yield false-negative results.
8. Oxidase reactions of gram-negative bacilli should be determined on non-selective and non-differential media to ensure valid results. Also, colonies taken from media containing high levels of glucose may give false-negative reactions.
9. It is recommended to use colonies that are 18-24 hours old. Older colonies will produce weaker reactions.
10. Any color changes appearing after 20 seconds should be disregarded.

Performance and Evaluation

Performance of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Colourless to reddish brown coloured solution.

Clarity

Clear solution without any precipitate.

Cultural Response

Biochemical identification was carried out by pouring 0.2ml of Gaby-Hadley Reagent A (R027) and 0.3ml of Gaby-Hadley Reagent B (R028) on to the Nutrient Agar (M001) plate containing 24-48 hours old isolated colony.

Organism	Colour of Colony	Oxidase Reaction
<i>Neisseria gonorrhoeae</i> # 6 % %	Deep purple to blue	Positive
<i>Pseudomonas aeruginosa</i> # 6 % %		Positive
<i>Staphylococcus aureus</i> ATCC 25923	No colour change	Negative

Reference

- 1) Gaby, W. L., and L. Free. 1958. Differential diagnosis of pseudomonas-like microorganisms in the clinical laboratory. J. Bacteriol. 76:442–444.
- 2) Gaby, W. L., and C. Hadley. 1957. Practical laboratory test for the identification of Pseudomonas aeruginosa. J. Bacteriol. 74:356–358.
- 3) MacFaddin, J. 1972. Biochemical tests for the identification of medical bacteria. Williams and Wilkins Company, Baltimore, MD.

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