

**KCMC Biotechnology
Laboratory, Microbiology**

**STANDARD
OPERATING
PROCEDURE**

Effective Date

**SOP-Number
MIC.032**

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**Date
24 August 2006**

Title: Dryslide™ OXIDASE TEST (BD/BBL™)

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Approvals/Date:

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This SOP has been read and understood by:

Name	Date
Signatures on original copy.	
1.	
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Annual Review	
By	Date

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**Date
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Title: Dryslide™ OXIDASE TEST (BD/BBL™)

Document History:

Version Number	Reason for Changes	Date

Copies distributed to:

Name	Date

Title: Dryslide™ OXIDASE TEST (BD/BBL™)

PURPOSE

For the detection of cytochrome c oxidase activity in a variety of Gram negative organisms.

PRINCIPLE

The Dry Slide™ Oxidase is a disposable slide with a filter paper reaction area containing N,N,N,N-tetramethyl-p-phenylenediamine dihydrochloride. Cytochrome oxidase produced by the organism oxidizes cytochrome c which in turn oxidizes the reagent to form a purple compound.

SCOPE

This Standard Operating Procedure applies to the testing for cytochrome oxidase by technical staff in the microbiology laboratory who have been trained and are competent in the use and performance of this test.

SPECIMEN COLLECTION – NA

EQUIPMENT/MATERIALS

DrySlide™ Oxidase (Store at 5-30 C)

Inoculating loop or wooden applicator stick.

Fresh culture (24-48 hrs) of test organism on non-selective media (e.g. Blood Agar)

QUALITY CONTROL

Frequency: Each shipment of each lot of tests.

Controls/Acceptable Results:

P. aeruginosa ATCC27853 - Oxidase Positive/purple

E. coli ATCC 25922 - Oxidase Negative/no color change

Corrective Actions for Unacceptable QC Results:

1. Repeat test using fresh subcultures of control organisms.
2. If still unsatisfactory, do not use for identification of isolates.
3. Arrange for replacement.

Documentation:

1. Record QC results on OXIDASE QC sheet.
2. Record unacceptable results and corrective actions on a QC DEVIATION form and submit to supervisor for review..
3. Supervisor will review QC monthly.

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TEST PROCEDURE

1. Open the packet and remove a DrySlide.
2. Using a label provided in the kit mark the date in one week and reseal. Discard all unused slides after one week.
3. Using an inoculating loop or wooden applicator stick remove the colonies to be tested.
4. Smear the organism directly on to the filter paper square reaction area of the slide.

TEST READING

1. Examine the reaction area for development of purple color. Color will develop in 20 seconds.
2. Some organisms may produce a very light purple color or reaction may take longer than 20 sec. to develop (e.g. *Pasteurella* spp., mucoid *P. aeruginosa*).
3. A slight gray discoloration may develop with organisms that are oxidase negative – disregard.

INTERPRETATION

Positive – purple color development

Negative – no color change

RECORDING RESULTS

Enter results on POSITIVE CULTURE Form.

REFERENCE

Package Insert, BBL/BD DrySlide Oxidase, 2003. BD, Sparks, MD.

Kimberle, CC, Lauderdale, T. 2003. Reagents, Stains and Media. In: Manual of Clinical Microbiology, 8th Ed., ASM Press, Washington, DC.

APPENDIX A – Oxidase Test QC sheet

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APPENDIX A

**KCMC Biotechnology Laboratory
Microbiology**

**Quality Control
OXIDASE TEST**

CONTROL ORGANISMS/ACCEPTABLE RESULTS:

Pseudomonas aeruginosa - Positive

E. coli - Negative

QC DATE	QC BY	LOT#	<i>P. aeruginosa</i> (+)	<i>E. coli</i> (-)	A/NA*

*A/NA = Acceptable/Not acceptable
DEVIATION FORM

DOCUMENT ALL CORRECTIVE ACTION ON QC

Supervisor Review :						

OXIDASE QC/QC SHEETS

Title: Dryslide™ OXIDASE TEST (BD/BBL™)