



STANTON TERRITORIAL HEALTH AUTHORITY

Yellowknife, Northwest Territories

TITLE: Disc Diffusion – Cefoxitin	Revision Date: 10-March-2016	Issue Date: 10-March-2014
Document Number: MIC50600	Status: Approved	
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PURPOSE:

Cefoxitin screening is used for phenotypic detection of *mecA*-mediated resistance to oxacillin and other penicillinase-stable penicillins. Cefoxitin has been shown to be more accurate for detection of this kind of resistance because it is a more powerful inducer of the system that regulates *mecA*. Isolates of *Staphylococcus aureus* that are resistant to a 30ug Cefoxitin disc are considered to be Methicillin Resistant *Staphylococcus aureus* (MRSA).

SAMPLE INFORMATION:

Type	Pure, well isolated colonies, Rapid Staph: pos, Catalase: pos
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REAGENTS and/or MEDIA:

- 30ug Cefoxitin Disc
- Mueller Hinton Agar Plate
- 0.85% Sterile NaCl

SUPPLIES:

- Wooden stick
- Plastic test tube
- DensichekPlus

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EQUIPMENT CALIBRATION AND MAINTENANCE:

- Densichek requires daily zeroing, as well as monthly calibration
- See **Procedure MIC70100 DensichekPlusPRO**

SPECIAL SAFETY PRECAUTIONS:

Standard precautions should always be followed

QUALITY CONTROL:



Weekly AST is performed. See Procedure **MIC60300 – Weekly KB/E TEST QC**

PROCEDURE INSTRUCTIONS:

Step	Action
Performing a Cefoxitin Disc Diffusion Test	
1	Using a wooden stick, choose 2-3 well isolated colonies
2	Prepare a suspension in sterile saline equivalent to a 0.5 McFarland standard
3	Moisten a sterile swab with the suspension and spread evenly over a Mueller Hinton Agar plate, as for Kirby Bauer testing.
4	Place the 30ug FOX disc on the plate and incubate for 16-18hrs at 35C
5	Measure and record in mm the diameter of the zone, if any

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INTERPRETATION OF RESULTS:

IF	THEN
Greater than or equal to: 22mm	mecA negative, Methicillin Sensitive <i>S.aureus</i> (MSSA) 
Less than or equal to: 21mm	mecA positive, Methicillin Resistant <i>S.aureus</i> (MRSA) 

REFERENCES:

- Clinical and Laboratory Standards Institute. (2012). Screening Tests for B-lactamase production, Oxacillin Resistance, and mecA Oxacillin Resistance. *Performance Standards for AST; 22nd Informational Supplement* , 80-81.

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REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	31Dec13	Initial Release	Darrach (A)