TITLE - MICRO – 734 - Handling Manual Blood Culture Method

PRINCIPLE/PURPOSE: Blood cultures can be processed in the laboratory either by manual or by automated methods. The term manual blood culture technique will refer to methods that do not employ instrumentation to monitor the growth of microorganisms. Manual blood culture monitoring is performed by visual inspection of the broth media as well as gram stains and plate growth.

SCOPE: To provide instruction on how to handle blood culture bottles that are not compatible with the BactT Alert analyzer.

SPECIMEN:

 Type: Anaerobic/aerobic adult or aerobic pediatric blood culture broth.

Handling Conditions: Deliver to microbiology immediately. Any delay in incubation could result in adverse patient outcome.

EQUIPMENT AND MATERIALS:

 Materials: Gram stain slides and stain, alcohol preps, BAP, Choc, MAC, and CDC plates, anaerobic bags and indicators, safety blood culture units (ventilators), loops, and PPE.

Preparation: Refer to plating of blood culture specimens.

 Storage Requirements: Blood culture bottles should be processed immediately; however, the bottles are acceptable at room temperature for 24 hours.

QUALITY CONTROL: Gram stain controls are performed every day.

PROCEDURE - STEPWISE:

1. Inoculate BAP, MAC, Choc, and CDC plates with the blood culture broth from each bottle received.
2. Place the plates and bottles in the CO2 incubator for 12 – 24 hours.

Day 1

1. After 12 – 24 hours of incubation, visually inspect the bottle(s) for gas production, turbidity, hemolysis, or color change which could indicate growth. Inspect plates for growth. Make and read a gram stain from all bottles received. If there is growth refer to the Positive Blood Culture Workup Procedure. If no growth is noted or no organisms are seen on the gram stain, continue to STEP 4 of this procedure.
2. Document observations on the worksheet.
3. Inoculate another set of plates from the broth. Place ALL plates in the CO2 incubator.
4. Before the end of first shift, inspect all bottles and plates for growth. If there is growth, refer to the Positive Blood Culture Procedure. If there is no growth, document observations on the worksheet. Re-incubate all plates and bottles.

Day 2

1. Visually inspect the bottle(s) for gas production, turbidity, hemolysis, or color change. Inspect plates for growth. Make and read a gram stain from all bottles received. If there is growth refer to the Positive Blood Culture Workup Procedure. If no growth is noted or no organisms are seen on the gram stain, continue to STEP 8 of this procedure.
2. Document observations on the worksheet.
3. Inoculate another set of plates from the broth. Place ALL plates in the CO2 incubator.
4. Before the end of first shift, inspect all bottles and plates for growth. If there is growth, refer to the Positive Blood Culture Procedure. If there is no growth, document observations on the worksheet. Re-incubate all plates and bottles.

 Day 3 - 4

1. Visually inspect all bottles and plates for growth. If there is growth, proceed with the Positive Blood Culture Workup. Inoculate another set of plates from the broth. Place ALL plates and bottles in the CO2 incubator.

Day 5

1. If there is no growth and no organisms seen after 5 days on the gram stains, finalize as NO GROWTH AEROBICALLY/ANAEROBICALLY or NO GROWTH AEROBICALLY in LIS.

INTERPRETATION & REPORTING RESULTS:

 Reference Ranges: No growth and no organisms seen.

Procedures for Abnormal Results: Refer to Positive Blood Culture Workup Procedure

RELATED PROCEDURES:

Gram Stain

Positive Blood Culture Workup

Plating Blood Cultures

REFERENCES:

1. Principles and Procedures for Blood Cultures; Approved Guideline. M47-A Vol. 27 No. 17. P. 10-11. Clinical and Laboratory Standards Institute.

SUPPLEMENTAL MATERIALS/ADDENDUM:

Manual Blood Culture Workup

Day 1

Gram Stain1 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_

BAP 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAC 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHOC 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CDC 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gram Stain 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_

Day 2

Gram Stain 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_

BAP 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAC 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHOC 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CDC 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gram Stain 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_

Day 3

Gram Stain 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_\_

BAP 3 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAC 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHOC 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CDC 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Day 4

Gram Stain 6\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_

BAP 4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAC 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHOC 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CDC 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Day 5

Gram Stain 7\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Tech:\_\_\_\_\_\_\_ Date/Time:\_\_\_\_\_\_\_\_

BAP 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAC 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CHOC 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CDC 5\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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SOP

HISTORY PAGE

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SOP Title: Handling Manual Blood Culture Method

Written By: Jacee Farmer and Shaye Yarbrough

Manual in which Hard Copy of this SOP is located: Microbiology Procedure Manual IV

Distribution: Sharepoint

Supersedes Procedure: N/A

SOP CHANGE CONTROL

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