TITLE: CAMP Test	Revision Date: 20-April-2018	Issue Date: 20-April-2016
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Distribution: Microbiology Test Manual	Page: 1 of 4	
Approved by: S. Asmussen, Manager of Diagnostic Services	Signed by: 	

PURPOSE:

Certain bacterial species produce a thermostable, extracellular, diffusible protein that acts synergistically with the beta-lysin produced by *Staphylococcus aureus* to produce a zone of enhanced hemolysis on blood agar. This protein is named the CAMP factor. A positive CAMP reaction shows enhanced hemolysis in the form of an arrowhead or flame-shape when the 2 isolates are placed perpendicular to each other. This test is useful in the identification of *Streptococcus agalactiae* and *Listeria monocytogenes*.

REAGENTS and/or MEDIA:

- Blood Agar Plate

SUPPLIES:

- Sterile loop

SPECIAL SAFETY PRECAUTIONS:

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potentially infectious materials or cultures.

- Lab gown must be worn when performing activities with potential pathogens.
- Gloves must be worn when direct skin contact with infected materials is unavoidable.
- Eye protection must be used where there is a known or potential risk of exposure to splashes.

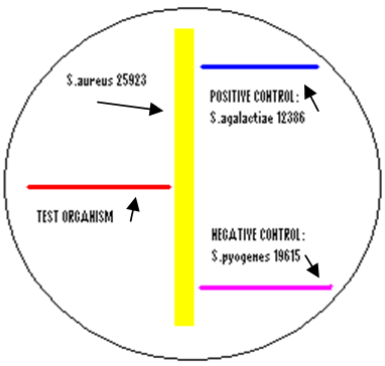
- All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC).
- The use of needles, syringes, and other sharp objects should be strictly limited.

QUALITY CONTROL:

Performed each time a test is performed:

- Positive Control: *S.agalactiae* ATCC12386
- Negative Control: *S.pyogenes* ATCC19615
- Beta hemolysin control: *S.aureus* ATCC25923

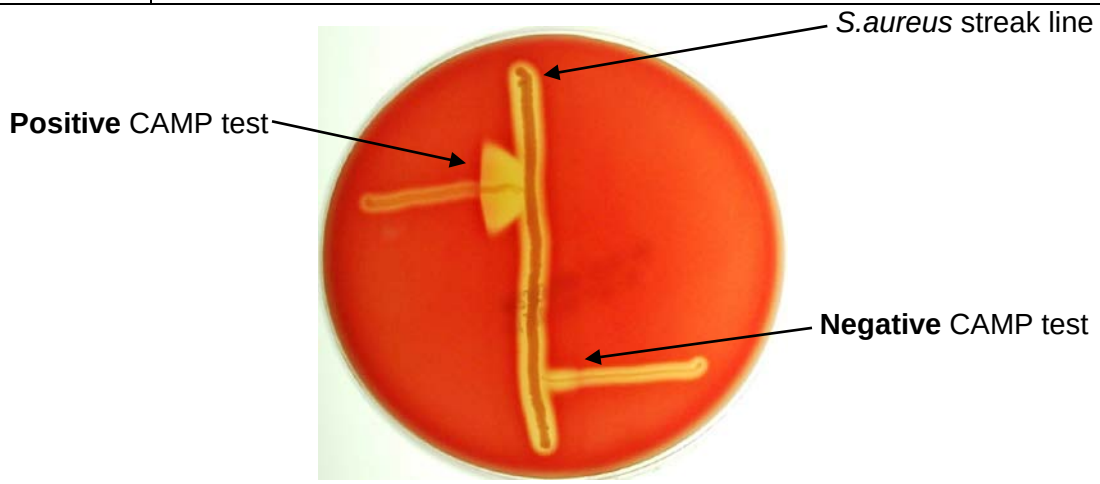
PROCEDURE INSTRUCTIONS:

Step	Action
Performing a CAMP Test	
1	**LIS CODE: ^CAMP** Streak *S.aureus* ATCC25923 in a straight line across the center of the plate
2	Streak the unknown test organism perpendicular to the staphylococcal streak line • They should be approximately 2mm apart Label the reverse side of the plate, under the streak line, with the accession number and isolate number of the sample
3	Streak the positive control: *S.agalactiae* ATCC12386 perpendicular to the *S.aureus* streak. Label the reverse side of the plate as “POS Control”
4	Repeat with the negative control: *S.pyogenes* ATCC19615. Label the reverse side of the plate as “NEG Control” 

5	Incubate the plate overnight at 35°C in CO2 **NOTE:** For identification of a possible *Listeria monocytogenes,* it is recommended that the plate be incubated in ambient air at 35°C for 24 hours
6	Observe for hemolysis

INTERPRETATION OF RESULTS:

IF	THEN
Positive	Arrowhead/flame-shaped zone of hemolysis
Negative	No enhanced zone of hemolysis



REFERENCES:

- Garcia, L. S. (n.d.). CAMP Factor Tests. *Clinical Microbiology Procedures Handbook, 3rd Ed* , pp. 3.17.8.1-3.17.8.4.
- American Society for Microbiology. (n.d.). *CAMP Test Protocols*. Retrieved October 23, 2013, from http://www.microbelibrary.org/component/resource/laboratory-test/3086-camp-test-protocols

REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	31Dec13	Initial Release	A.Darrach
2.0	31Mar16	Update of “Special Safety Precautions” to reflect risk assessment recommendations.	C. Russell