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Section: Genital Tract Culture Manual	Subject Title: Seminal Fluid	
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SEMINAL FLUID

I. Introduction

Bacterial infections of the seminal tract have been postulated to potentially play a role in male infertility. Pathogens include *Neisseria gonorrhoeae* (GC) and *Chlamydia trachomatis* (CT). Other possible pathogens include *Enterococci*, *S. aureus*, *Klebsiella* species, *Escherichia coli* and other gram negative bacilli. Possible pathogens in seminal fluid at concentrations $\geq 10^6$ CFU/L has been defined as “significant bacteriospermia” which may be associated with infertility. However, bacteria in these concentrations may also represent contamination given the circumstances of sample collection and colonization of the peri-urethral orifice.

II. Specimen Collection and Transport

See Pre-Analytical – Specimen Collection QPCMI2001 [Seminal Fluid](#)

III. Reagents and Media

See [Analytical Process - Bacteriology Reagents/Materials/Media List QPCMI10001](#)

IV. Procedure

A. Processing of Specimens:

See Specimen Processing Procedure QPCMI06003 [Seminal Fluid](#)

- a) Direct Examination: Gram stain.
- b) Culture:

Media	Incubation
Blood Agar (BA)*	CO ₂ , 35°C x 48 hours
Martin-Lewis Agar (ML) ^a	CO ₂ , 35°C x 72 hours
MacConkey Agar (MAC)*	O ₂ , 35°C x 48 hours

*Use a 10 ?l disposable culture loop to inoculate media

^aUse a swab to inoculate media

^aDilute specimen 1:2 using sterile saline before inoculating ML agar

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B. Interpretation of cultures:

1. Perform colony counts on all morphotypes of [Possible Seminal Tract Pathogens](#) isolated on BA.
2. Work up organisms other than GC as per the table below.

No. of colonies on BA	Colony Count	Work-up
Non-Seminal Tract Pathogens (see list below) – any amount	Any amount	None
Possible Seminal Tract Pathogens (see list below):		
<10	<10 ⁶ CFU/L	None
≥10	≥10 ⁶ CFU/L	ID + sens

Possible Seminal Tract Pathogens

*Chlamydia trachomatis**

GC*

Enterobacteriaceae

Pseudomonas aeruginosa

Other gram negative bacilli

Enterococcus species

Staphylococcus aureus

Beta-haemolytic streptococci

*significant in any amount

Non-Seminal Tract Pathogens

diphtheroids

coagulase-negative staphylococci

Bacillus species

viridans streptococci

Lactobacillus species

Yeasts

3. Examine the ML plate at 24 and 72 hours for colonies suspicious for GC. For GC work up, refer to [Bacteria Workup Manual](#)

C. Susceptibility testing:

Refer to Susceptibility Testing Manual.

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VI. Reporting Results

Negative Report:

No Growth

“No growth”

Non-seminal tract pathogens and
<10⁶ CFU/L (<10 colonies) possible
seminal tract pathogens and no
Neisseria gonorrhoeae isolated

“No significant growth”

Positive Report:

≥10⁶ CFU/L (≥10 colonies) possible seminal tract pathogens:

Preliminary report: Morphologic description of organisms with corresponding colony count/L. “Identification and susceptibility to follow.”

Final report: Organism name with corresponding colony count/L and susceptibility testing results.

Neisseria gonorrhoeae isolates in any amount:

Report: “*Neisseria gonorrhoeae*” ”isolated” (do not quantitate).

Telephone all positive GC cultures to floor/ordering Physician. Refer to [Isolate Notification and Freezing Table QPCMI15003](#)

For all positive GC cultures, send a Communicable Disease Report to the Medical Officer of Health. Refer to [Communicable Disease Results Reporting Process QPCMI16000](#) and [Reportable Diseases to the Medical Officer of Health QPCMI16001](#).

For all positive reports, if no GC is isolated, include TEST comment “Significance of this result is unclear and may represent contamination.”

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VI. References

Keck C, et al. 1998. Seminal tract infections: impact on male fertility and treatment options. Human Reproduction Update 4(6):891-903.

Jarvi K, et al. 1996. Polymerase chain reaction-based detection of bacteria in semen. Fertility and Sterility 66(3):463-467.

Cottell E. Fertility and Sterility 2000 74(3):465-470.

World Health Organization. 1992. Laboratory Manual for the Examination of Human Semen and Sperm – Cervical Mucus Interaction, 3rd ed. Cambridge University Press, Cambridge.