

Specimen Collection and Handling of Fluids (excluding CSF)

Applicability This document applies to all Central Zone – ECH personnel of AHS Laboratory Services and laboratories administered under the Covenant Health Group and the Lamont Health Centre collectively referred to here as Laboratory Services.

Purpose: This procedure provides instructions for the collection and handling of Pleural Fluid, Peritoneal Fluid, and Synovial Fluid for culture, cell count, crystals, cytology and miscellaneous chemistry.

Materials:

- Pediatric blood culture vial
- EDTA Vacutainer tube
- Sterile tube (screw top preferred) or sterile container
- Clean frosted glass slide
- Iodine swabs
- Alcohol swabs
- Needle and syringe

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**Specimen
Requirements:**

Test	Collection Container	Volume required	Minimum Collection Volume
Serous Fluid (pleural or peritoneal)			
Culture	<ul style="list-style-type: none"> • Pediatric Blood Culture vial • Air dried smear 	1-3 mL	1 mL
Cell Count	<ul style="list-style-type: none"> • EDTA Vacutainer (*BHC) • Lithium Heparin (no gel) or plain sterile tube or container (**CH) • Mix specimen well 	3-5 mL	1 mL
Misc. Chemistry	Plain sterile tube (screw top preferred)	3-5 mL	0.5 mL/test
Cytology	Sterile Container	All fluid remaining	250 mL (ideal)
Synovial Fluid (Joint)			
Culture	<ul style="list-style-type: none"> • Pediatric Blood Culture vial • Air dried smear 	1-3 mL	1 mL
Cell Count & crystals	<ul style="list-style-type: none"> • EDTA Vacutainer (*BHC) • Lithium Heparin (no gel) or plain sterile (**CH) • Mix specimen well 	3-5 mL	1 mL
Misc. Chemistry	Plain sterile tube (screw top preferred)	3-5 mL	0.5 mL/test
Cytology	Plain sterile tube (screw top preferred)		10 mL

* BHC – refers to samples sent to Bonnyville for testing

** CH – refers to samples sent to Edmonton for testing

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Procedure:

Step	Action	Notes
Physician	<ul style="list-style-type: none"> Prepare the skin for puncture by using an iodine swab, then alcohol swab. Obtain the fluid using a sterile needle and syringe. Gently agitate fluid prior to aliquoting it for specific tests as per Specimen Requirements table. 	Synovial fluid volume may be limited so the physician should prioritize the requested tests.
Nursing Staff	<ul style="list-style-type: none"> Enter the specific tests requested in MediTech and generate a barcode label Label the tubes as per LAB-00049 AHS Acceptance of Laboratory Samples and Tests Requests. Deliver specimens to the laboratory as soon as possible 	Ensure that the outside of the tube(s) is not contaminated with fluid.
Laboratory	<p>Microbiology</p> <ul style="list-style-type: none"> Specimens for C&S should be cultured within 24 hours of collection. Specimens received between 2 – 4 days after collection will be processed. Include comment “Results may be erroneous due to delay in transit/processing” on the report. <p>Hematology</p> <ul style="list-style-type: none"> Specimens for cell counts should be tested within 24 hours from the time of collection if refrigerated. Specimens received >24 hours old will be processed. Include comment “Results may be erroneous due to delay in transit/processing.” <p>Chemistry</p> <ul style="list-style-type: none"> Sample should be received at testing lab within 24 hours of collection. Otherwise sample should be spun, aliquoted & frozen. 	<ul style="list-style-type: none"> If less than 1mL of fluid obtained for culture make a direct smear and submit in a sterile container (transport time to testing facility should be less than 4 hrs)

References:

- Capital Health Guide to Lab Services, Oct 29, 2007.
- CLSI document H56-A Body Fluid Analysis for Cellular Composition; Approved Guideline Volume 26 Number 26 - 2006

Related

Documents: AHS Insite – Laboratory Quality Manual – Sample Acceptance Documents

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