Synovial fluid analysis
prosthetic joint infection (PJI)

Allina Health
LABORATORY

Absolute minimum volume PJI synovial fluid collection guide:

These are *absolute minimum volumes. Testing cannot be performed with less volume and will be canceled*.

Test name	Test #	Transport tube	*Absolute minimum* volume
Alpha defensing, lateral flow assay, synovial fluid	994	**Plain red top tube** with no additive • *Don't submit fluid with a high blood content (dark red). Such specimens can't be tested and will be rejected* • *Pink-tinged fluids are OK*	**0.2 mL (4 drops)** *Optimal volume is 0.6 mL (12 drops).*
Culture and gram stains	6558 Body fluid (Aerobic) 6554 Anaerobic	**Preferred: A.C.T.1 transport vial** for fluids (all bacterial, mycobacterial, and fungal cultures can be performed from this specimen) **Wipe top of vial with alcohol pad and allow to dry. Inject fluid through the rubber stopper.** **OR** Capped syringe	**0.5 mL (10 drops)** *More is better – submit any surplus fluid in a capped syringe to enhance diagnostic yield with faster time to positivity.*
Cell count & differential, body fluid	9420	**EDTA (lavender) tube**	**0.5 mL total for cell count and crystals (10 drops)** *Optimal volume is 1.0 mL*
Crystal ID, body fluid	425		
Collection tips: • Total ***minimum*** fluid volume required for all the above tests/containers = ***1.2 mL*** • Total ***optimum*** fluid volume required = ***2.6 mL*** • Allocate the fluid volume at time of collection into the containers as shown above			

Aspirates less than 1.2 mL:

Total volume aspirated	Submit these specimens
<0.5 mL	Alpha defensin only (place all fluid in red top)
0.5 - 1.1 mL	Alpha defensin (at least 4 drops in red top)
	Cell count (at least 10 drops in lavender top)

- These are time-sensitive, irretrievable specimens
- Keep all specimens at **room temperature** and make sure the specimens get to AHL lab as soon as possible, before the end of the day
- Do not keep specimens in the clinic overnight or put specimens in a lockbox
- Cancel orders for any other tests that could not be collected
- All specimen tubes/containers must be **properly labeled** with two patient identifiers, source and date/time of collection

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