MAYO CLINIC LABORATORIES

Test Definition: CRSBF

Crystal Identification, Body Fluid

Overview

Useful For
Identifying the presence and type of crystals in body fluid

Method Name
Compensated Polarized Light Microscopy

NY State Available
Yes

Specimen

Specimen Type
Body Fluid

Specimen Required
Specimen Required
Specimen Type: Synovial Fluid, Prosthetic Joint Fluid
Container/Tube: Lavender top (EDTA)
Acceptable: Green top (heparin)
Specimen Volume: 2 mL

Specimen Type: Bile Fluid
Container/Tube: Red top
Specimen Volume: 2 mL

Specimen Type: Bronchoalveolar Lavage (BAL)
Container/Tube: Body fluid container
Specimen Volume: 2 mL

Specimen Type: Pleural Fluid, Peritoneal Fluid, Pericardial fluid
Container/Tube:
Preferred: Body fluid container
Acceptable: Lavender top (EDTA) or Green top (heparin)
Specimen Volume: 2 mL

Specimen Minimum Volume
0.5 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)		
	Ambient	24 hours	
	Frozen		

Clinical & Interpretive

Clinical Information
Birefringent crystals are found in the synovial fluid of more than 90% of patients with acutely inflamed joints. Monosodium urate crystals are seen in gouty fluids and calcium pyrophosphate crystals are seen in chondrocalcinosis. The urates are usually needle-shaped, and the calcium crystals are often rhomboidal. Cholesterol crystals may also be observed.

Reference Values
None seen

If present, crystals are identified.

Interpretation
Positive identification of crystals provides a definitive diagnosis for joint disease.

Cautions
Powdered anticoagulants such as oxalate are themselves crystalline or may cause crystals to form; their use may cause false-positive results or mask the presence of synovial fluid crystals definitive for the disease.

Clinical Reference
Hussong JW, Kjeldsberg CR, eds: Kjeldsberg's Body Fluid Analysis. ASCP Press; 2015

Performance

Method Description
The specimen is examined with a polarizing microscope with and without a first-order red compensator. Cholesterol crystals appear as bright, square or rectangular plates. Pyrophosphate crystals, rhomboidal, are weakly birefringent. Urate crystals are mainly needle-shaped and strongly doubly refractile; they may be found within leukocytes.(Hussong JW, Sorensen E, Perkins SL, et al: Laboratory methods. In: Hussong JW, Kjeldsberg CR, eds. Kjeldsberg's Body Fluid Analysis. ASCP; 2015:chap 2)

PDF Report
No

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Day(s) Performed
Monday through Sunday

Report Available
1 day

Specimen Retention Time
1 week

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Main Campus

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information
89060

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
CRSBF	Crystal ID, BF	6825-4

Result ID	Test Result Name	Result LOINC® Value
CRYFT	Fluid Type	14725-6
CRYID	Crystal ID	6825-4
CRYCM	Comment	77202-0