Overview

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

Method Name
Compensated Polarized Light Microscopy
Includes cytospin prep.

NY State Available
Yes

Specimen

Specimen Type
Body Fluid

Specimen Required

Container/Tube:

Preferred: Lavender top (EDTA)

Acceptable: 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

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body Fluid</td>
<td>Refrigerated (preferred)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>24 hours</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
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Clinical and 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; their use may cause confusion masking the presence of synovial fluid crystals definitive for the disease.

Clinical Reference

Performance

Method Description
Synovial fluid is anticoagulated with heparin or EDTA (not oxalate because calcium oxalate crystals form). 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. (Phelps P, Steele AD, MacCarty DJ Jr: Compensated polarized light microscopy. Identification of crystals in synovial fluids from gout and pseudo gout. JAMA 1968;203:508-512)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Sunday; Continuously

Analytic Time
1 day

Maximum Laboratory Time
1 day

Specimen Retention Time
1 week

Performing Laboratory Location
Rochester

Fees and 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 Regional Manager. For assistance, contact Customer Service.

Test Classification

This test uses a standard method. Its performance characteristics were determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

89060

LOINC® Information

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<td>Crystal ID, Synovial Fl</td>
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