Overview

Useful For
Aids in identifying the cause of ascites
Aids in differentiating exudative and transudative pleural effusions

Method Name
Photometric, Brom cresol Green

NY State Available
Yes

Specimen

Specimen Type
Body Fluid

Advisory Information
If cerebrospinal fluid (CSF) is received, then the laboratory will automatically change the test to ALBSF / Albumin, Spinal Fluid.

Necessary Information
1. Date and time of collection.
2. Specimen source
   -Preferred: Identify source name from the following list with location (if appropriate):
     --Peritoneal Fluid (peritoneal, abdominal, ascites, paracentesis)
     --Pleural Fluid (pleural, chest, thoracentesis)
   -Acceptable: Write in source name with source location (if appropriate)

Specimen Required

Collection Container/Tube: Sterile container
Submission Container/Tube: Plastic vial
Specimen Volume: 1 mL

Collection Instructions: Centrifuge to remove any cellular material.

Specimen Minimum Volume
0.5 mL

Reject Due To

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>Reject</th>
</tr>
</thead>
</table>

Document generated November 13, 2019 at 4:53am CST
Test Definition: ALBFL
Albumin, BF

**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>7 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frozen</td>
<td>30 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td>24 hours</td>
<td></td>
</tr>
</tbody>
</table>

**Clinical and Interpretive**

**Clinical Information**

Peritoneal fluid: Ascites is the pathologic accumulation of excess fluid in the peritoneal cavity caused by changes in vascular permeability, hydrostatic pressure, and oncotic pressure. The most common causes of ascites in patients are cirrhosis (80%), malignancy (10%), cardiac failure (5%), and infection.

Total protein: 3.0 g/dL, historically was used to classify ascites fluid as transudate or exudate and has a reported accuracy of only 55% in identifying exudates. The measurement of the serum-ascites albumin gradient (SAAG), calculated as serum albumin concentration minus ascites albumin concentration, has largely replaced with the use of total protein.

SAAG has been shown to correlate directly with portal pressure and SAAG results of 1.1 g/dL or greater are 97% accurate at identifying portal hypertension. Conditions associated with high SAAG include cirrhosis, acute liver failure, fatty liver disease, alcoholic hepatitis, portal vein thrombosis, hepatic malignancy, and veno-occlusive disease. Cardiac ascitic fluid caused by congestive heart failure has both a high SAAG (> or =1.1 g/dL) and total protein greater than 2.5 g/dL. Conditions associated with low SAAG (<1.1 g/dL) include peritoneal malignancy, tuberculosis, pancreatitis, connective tissue disease, and nephrotic syndrome.

Pleural fluid: Pleural fluid is normally present within the pleural cavity surrounding the lungs, serving as a lubricant between the lungs and inner chest wall. Pleural effusion develops when the pleural cavity experiences an overproduction of fluid due to increased capillary hydrostatic and osmotic pressure that exceeds the ability of the lymphatic or venous system to return the fluid to circulation. Laboratory-based criteria are often used to classify pleural effusions as either exudative or transudative. Exudative effusions form due to infection or inflammation of the capillary membranes allowing excess fluid into the pleural cavity. Patients with these conditions benefit from further investigation and treatment of the local cause of inflammation. Transudative effusions form due to systemic conditions such as volume overload, end-stage renal disease, and heart failure that can lead to excess fluid accumulation in the pleural cavity. Patients with transudative effusions benefit from treatment of the underlying condition.(1) Dr. Richard Light derived criteria in the 1970s for patients with pleural effusions that are still used today.(2) Light's criteria were designed to be sensitive for detecting exudates at the expense of specificity.(3) Heart failure and recent diuretic use contribute to most misclassifications by Light's criteria (transudates falsely categorized as exudates). Serum-to-fluid protein or albumin gradient (serum protein or albumin minus fluid protein or albumin) may be calculated in these cases and when more than 3.1 g/dL (protein) or 1.2 g/dL (albumin) suggests the patient has a transudative effusion.

**Reference Values**
Peritoneal fluid albumin is used to calculate the serum-ascites albumin gradient (SAAG). Values > or =1.1 g/dL suggest portal hypertension. Pleural fluid albumin may be used to calculate a serum-effusion albumin gradient. Values >1.2 g/dL are most consistent with a transudative process. All other fluids refer to www.mayocliniclabs.com for further interpretive information.

**Interpretation**

Peritoneal fluid albumin is used to calculate the serum-ascites albumin gradient (SAAG). Values of 1.1 g/dL or higher suggest portal hypertension.

Pleural fluid albumin may be used to calculate a serum-effusion albumin gradient. Values above 1.2 g/dL are most consistent with a transudative process.

For all other fluids, the albumin concentration and gradient have only been evaluated in peritoneal and pleural fluids. All other fluid albumin concentrations should be interpreted in conjunction with serum albumin concentration and other clinical findings.

**Cautions**

Serum and ascitic fluid for determination of serum-albumin ascites gradient (SAAG) should be collected on the same day.

**Clinical Reference**


**Performance**

**Method Description**

The dye, bromcresol (BCG) green, is added to the sample in an acid buffer. The color intensity of the blue-green albumin-BCG complex is directly proportional to the albumin concentration and is determined photometrically. (Package insert: Roche Albumin reagent; Roche Diagnostic Corp., Indianapolis, IN, July 1999)

**PDF Report**

No

**Day(s) and Time(s) Test Performed**

Monday through Sunday; Continuously

**Analytic Time**

Same day/1 day

**Maximum Laboratory Time**

2 days
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 has been modified from the manufacturer’s instructions. 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
82042

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBFL</td>
<td>Albumin, BF</td>
<td>1747-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBF</td>
<td>Albumin BF</td>
<td>1747-5</td>
</tr>
<tr>
<td>797FL</td>
<td>Fluid Type, Albumin</td>
<td>14725-6</td>
</tr>
</tbody>
</table>