Clinical Use
- Evaluate adrenal function
- Marker for AME
- Additional marker for exogenous steroid use

Reference Range

<table>
<thead>
<tr>
<th></th>
<th>µg/dL</th>
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<tbody>
<tr>
<td>Adults</td>
<td>AM</td>
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<tr>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Children (AM)</td>
<td>Full-term infants (birth)</td>
</tr>
<tr>
<td></td>
<td>7 d</td>
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<tr>
<td></td>
<td>2 wk-3 mo</td>
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<td></td>
<td>3 mo-1 y</td>
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<td>1-17 y</td>
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Interpretive Information
- Cushing’s syndrome
- Adrenal insufficiency
- Exogenous Cushing’s (prednisone)
- AME

Clinical Background
Cortisol, the active glucocorticoid produced by the adrenal gland, is inactivated to cortisone in peripheral tissues. Both cortisol and cortisone levels are increased in patients with Cushing’s syndrome but reduced in patients receiving exogenous glucocorticoid (eg, prednisone). In apparent mineralocorticoid excess (AME), cortisone formation is reduced, allowing cortisol to act as a mineralocorticoid. Patients with AME have reduced cortisone and aldosterone levels but normal cortisol levels.

Licorice ingestion can inhibit conversion of cortisol to cortisone, thereby decreasing circulating cortisone levels.

Method
- Liquid chromatography, tandem mass spectrometry (LC/MS/MS)
- Analytical sensitivity: 0.1 µg/dL
- Analytical specificity: high concentrations of 20β-DHE/DHF decrease results; high concentrations of prednisolone interfere with measurement.

Specimen Requirements
1 mL refrigerated serum
0.3 mL minimum
No additive red top preferred
SST red top acceptable
Overnight fasting preferred
Specify time of day specimen was collected.