**Clinical Use**
- Determine estrogen status in women
- Monitor follicular development during induction of ovulation
- Assess estrogen production in males

**Reference Range**

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling phase</td>
<td></td>
<td>≤29</td>
</tr>
<tr>
<td>Follicular phase</td>
<td>39-375</td>
<td></td>
</tr>
<tr>
<td>Midcycle peak</td>
<td>94-762</td>
<td></td>
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<tr>
<td>Luteal phase</td>
<td>48-440</td>
<td></td>
</tr>
<tr>
<td>Postmenopausal</td>
<td>≤10</td>
<td></td>
</tr>
</tbody>
</table>

**Interpretive Information**
- Ovarian tumors
- Adrenal feminizing tumors
- Precocious puberty (female)
- Liver disease
- Male gynecomastia
- Ovarian failure
- Oral contraceptives

**Clinical Background**

Estradiol-17β (E2) is the major bioactive estrogen produced in the ovary. E2 is also produced by the adrenal glands, and in males by the testes, as well as by peripheral conversion from testosterone.

Serum E2 is measured to determine the estrogen status of women, such as in some cases of amenorrhea, and as a guide to monitoring follicular development during induction of ovulation.

The assay has high sensitivity and is therefore well suited for measurements in children and for diagnosing menopause.

**Method**
- Liquid chromatography tandem mass spectrometry (LC/MS/MS)
- Analytical sensitivity: 2 pg/mL

**Specimen Requirements**

- 0.5 mL refrigerated serum (no additive red top tube); 0.2 mL minimum
- SST red top unacceptable
- Specify age and sex on test request form.