**Clinical Use**
- Monitor estrogen replacement therapy

**Reference Range**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>230-2200</td>
</tr>
<tr>
<td>Women</td>
<td></td>
</tr>
<tr>
<td>Follicular phase</td>
<td>300-2600</td>
</tr>
<tr>
<td>Luteal phase</td>
<td>100-3200</td>
</tr>
<tr>
<td>Postmenopausal</td>
<td>100-1300</td>
</tr>
</tbody>
</table>

**Interpretive Information**
- Pregnancy
- Ovarian tumors
- Adrenal tumors
- Hypogonadism

**Clinical Background**
Estrone sulfate (E₁S) is the most abundant estrogen in peripheral blood. The primary source is the liver, where it is formed as the primary product of estradiol and estrone metabolism. E₁S also is the major estrogen secreted by the adrenal cortex. It is a weak estrogen but can be converted in the body to estradiol. E₁S is a major component of the drug Premarin®.

**Method**
- Hydrolysis, extraction, chromatography, radioimmunoassay (RIA)
- Analytical sensitivity: 40 pg/mL

**Specimen Requirements**
- 2 mL refrigerated serum
- 0.5 mL minimum
- No additive red top preferred
- SST red top acceptable