Corticosteroids have potent anti-inflammatory properties, and are used in a wide variety of inflammatory conditions such as arthritis, colitis, asthma, bronchitis, certain skin rashes, and allergic or inflammatory conditions of the nose and eyes.

### Synthetic Corticosteroids

**Compounds**

<table>
<thead>
<tr>
<th></th>
<th>USP Tailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prednisolone</td>
<td>1.46</td>
</tr>
<tr>
<td>2. Dexamethasone</td>
<td>1.34</td>
</tr>
<tr>
<td>3. Prednisolone 21-acetate</td>
<td>1.32</td>
</tr>
<tr>
<td>4. Betamethasone 17-valerate</td>
<td>1.10</td>
</tr>
</tbody>
</table>

**Conditions**

- **Column:** SunFire™ C₈, 4.6 x 150 mm, 5 μm
- **Part Number:** 186002737
- **Mobile Phase A:** Water
- **Mobile Phase B:** Acetonitrile
- **Flow Rate:** 1 mL/min
- **Isocratic:**
  - Time | Profile | %A | %B |
  - 0.0  | 50      | 50 | 50 |
  - 12.0 | 50      | 50 | 50 |
- **Injection Volume:** 10 μL
- **Sample Concentration:** 20 μg/mL in water; 1mg/mL stock solution prepared in acetonitrile
- **Temperature:** 30 °C
- **Detection:** UV @ 254 nm
- **Instrument:** Alliance® 2695 with 2996 PDA

**Detection:** UV @ 254 nm
Corticosteroids have potent anti-inflammatory properties, and are used in a wide variety of inflammatory conditions such as arthritis, colitis, asthma, bronchitis, certain skin rashes, and allergic or inflammatory conditions of the nose and eyes.

### Synthetic Corticosteroids

<table>
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<tr>
<th>Compounds</th>
<th>USP Tailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prednisolone</td>
<td>1.41</td>
</tr>
<tr>
<td>2. Dexamethasone</td>
<td>1.31</td>
</tr>
<tr>
<td>3. Prednisolone 21-acetate</td>
<td>1.22</td>
</tr>
<tr>
<td>4. Betamethasone 17-valerate</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Conditions

- **Column:** SunFire™ C8, 4.6 x 100 mm, 3.5 μm
- **Part Number:** 186002731
- **Mobile Phase A:** Water
- **Mobile Phase B:** Acetonitrile
- Flow Rate: 1 mL/min
- Isocratic: Time Profile %A %B
  - 0.0 50 50
  - 12.0 50 50
- Injection Volume: 10 μL
- Sample Concentration: 20 μg/mL in water; 1mg/mL stock solution prepared in acetonitrile
- Temperature: 30°C
- Detection: UV @ 254 nm
- Instrument: Alliance® 2695 with 2996 PDA

05/2005
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