Ibuprofen by HPLC for Kinetex 2.6um XB-C18, 75x4.6mm

**Column:** Kinetex® 2.6 µm XB-C18 100 Å, LC Column 75 x 4.6 mm, Ea

**Dimensions:** 75 x 4.6 mm ID

**Order No:** 00C-4496-E0

**Elution Type:** Isocratic

**Eluent A:** 600:400 Acetonitrile: Water with 4g of chloroacetic acid adjusted to pH 3.0 with ammonium

**Gradient**

<table>
<thead>
<tr>
<th>Step No.</th>
<th>Time (min)</th>
<th>Pct A</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>100</td>
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**Flow Rate:** 1.5 mL/min

**Col. Temp.:** 30 °C

**Detection:** UV-Vis Abs.-Variable Wave.(UV) @ 254 nm (ambient)

**Analyst Note:** The USP monograph specifies two system suitability requirements that must be met; these requirements are resolution and tailing factor:

- Rs between ibuprofen and valerophenone (the internal standard), and valerophenone and ibuprofen related compound C must not be less
- Rs between ibuprofen and valerophenone is 4.79
- Rs between valerophenone and ibuprofen related compound C is 4.68; and Tf for ibuprofen, valerophenone, and ibuprofen related compound C are 1.82, 1.02 and 1.01, respectively.

**ANALYTES:**

1. **Ibuprofen**
   - Retention Time: 1.521 min

2. **Valerophenone**
   - Retention Time: 1.861 min

3. **Ibuprofen related compound C**
   - Retention Time: 2.178 min