1. PHYSICAL AND CHEMICAL PROPERTIES

- **Batch Molecular Formula:** C\(_{16}\)H\(_{17}\)N\(_{3}\)O\(_{3}\)S.CH\(_{3}\)SO\(_{3}\)H
- **Batch Molecular Weight:** 427.49
- **Physical Appearance:** White crystalline solid
- **Solubility:** DMSO to 100 mM
- **Storage:** Store at RT
- **Batch Molecular Structure:**

2. ANALYTICAL DATA

- **TLC:** \(R_f = 0.5\) (Dichloromethane:Methanol:Ammonia soln. [85:15:1])
- **Melting Point:** Between 175 - 177°C
- **HPLC:** Shows >99.8% purity
- **\(^1\)H NMR:** Consistent with structure
- **Mass Spectrum:** Consistent with structure
- **Microanalysis:**
<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>47.76</td>
<td>47.8</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>4.95</td>
<td>4.88</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>9.82</td>
<td>9.86</td>
</tr>
</tbody>
</table>
**Product Information**

**Product Name:** KB-R7943 mesylate

**CAS Number:** 182004-65-5

**IUPAC Name:** 2-[2-[4-(4-Nitrobenzoyloxy)phenyl]ethyl]isothiourea mesylate

**Description:**
Potent, selective inhibitor of the reverse mode of the Na+/Ca²⁺ exchanger (IC₅₀ = 0.7 μM). Also inhibits the mitochondrial Ca²⁺ uniporter (MCU; IC₅₀ = 5.5 μM). Does not affect Na⁺-dependent transport systems or ionotropic glutamate receptors.

**Physical and Chemical Properties:**
Batch Molecular Formula: C₁₀H₁₇N₂O₅S·CH₃SO₃H
Batch Molecular Weight: 427.49
Physical Appearance: White crystalline solid

**Minimum Purity:** >99%

**Storage:** Store at RT

**Solubility & Usage Info:**
DMSO to 100 mM

**Stability and Solubility Advice:**
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**


