**Product Name:** Dantrolene, sodium salt  
**Catalog No.:** 0507  
**Batch No.:** 5  
**CAS Number:** 14663-23-1  
**EC Number:** 238-706-8  
**IUPAC Name:** 1-[[5-(4-Nitrophenyl)-2-furanyl]methylene]amino]-2,4-imidazolidinedione sodium salt

### 1. PHYSICAL AND CHEMICAL PROPERTIES

- **Batch Molecular Formula:** $\text{C}_{14}\text{H}_9\text{N}_4\text{NaO}_5\cdot 4\text{H}_2\text{O}$  
- **Batch Molecular Weight:** 408.29  
- **Physical Appearance:** Orange solid  
- **Solubility:** DMSO to 10 mM  
- **Storage:** Store at RT  

### 2. ANALYTICAL DATA

- **HPLC:** Shows 99.3% 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>41.19</td>
<td>41.42</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>4.2</td>
<td>4.03</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>13.72</td>
<td>13.67</td>
</tr>
</tbody>
</table>

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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Description:
Inhibits release of Ca\(^{2+}\) from sarcoplasmic reticulum via inhibition of ryanode receptor (RYR) channels. Displays selectivity for RYR1 and RYR3 over RYR2. Protective against the effects of a variety of conditions and agents, including excitatory amino acids. Skeletal muscle relaxant and neuroprotectant.

Physical and Chemical Properties:
Batch Molecular Formula: \(\text{C}_{14}\text{H}_{13}\text{N}_{3}\text{NaO}_{5}.4\text{H}_{2}\text{O}\)
Batch Molecular Weight: 408.29
Physical Appearance: Orange solid
Minimum Purity: \(\geq 98\%\)

Solubility & Usage Info:
DMSO to 10 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: