1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: $\text{C}_{21}\text{H}_{27}\text{N}_{3}\text{O}_{3}\text{S.2HCl.1/4H}_{2}\text{O}$
   Batch Molecular Weight: 478.94
   Physical Appearance: White solid
   Solubility: water to 100 mM
               DMSO to 20 mM with gentle warming
   Storage: Desiccate at RT
   Batch Molecular Structure:

2. ANALYTICAL DATA

   HPLC: Shows 99.2% purity
   $^1\text{H NMR:}$ Consistent with structure
   Mass Spectrum: Consistent with structure
   Microanalysis: Carbon Hydrogen Nitrogen
   Theoretical 52.66 6.21 8.77
   Found 52.72 6.14 8.79

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Product Name:** E-4031 dihydrochloride  
**Catalog No.:** 1808  
**Batch No.:** 4

**CAS Number:** 113559-13-0  
**IUPAC Name:** N-[4-[1-[2-(6-Methyl-2-pyridinyl)ethyl]-4-piperidinyl]carbonyl]phenyl]methanesulfonamide dihydrochloride

**Description:**
Selective blocker of K\(_{\text{11.1}}\) (hERG) channels; inhibits the rapid delayed-rectifier K\(^+\) current (I\(_{\text{k1}}\)). Reversibly prolongs action potential duration in guinea pig papillary muscle and isolated ventricular myocytes, without affecting Na\(^+\) or Ca\(^{2+}\) inward currents. Class III antiarrhythmic agent.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** C\(_{21}\)H\(_{27}\)N\(_5\)O\(_3\)S.2HCl.¼H\(_2\)O  
- **Batch Molecular Weight:** 478.94  
- **Physical Appearance:** White solid

- **Minimum Purity:** >98%

**Storage:**
- Desiccate at RT

**Solubility & Usage Info:**
- Water to 100 mM  
- DMSO to 20 mM with gentle warming

**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:**