**Product Name:** Medetomidine hydrochloride

**CAS Number:** 86347-15-1

**IUPAC Name:** 4-[1-(2,3-Dimethylphenyl)ethyl]-1H-imidazole hydrochloride

1. **PHYSICAL AND CHEMICAL PROPERTIES**

   - **Batch Molecular Formula:** \( \text{C}_{13}\text{H}_{16}\text{N}_{2}\text{HCl.}\frac{1}{2}\text{H}_{2}\text{O} \)
   - **Batch Molecular Weight:** 245.75
   - **Physical Appearance:** White solid
   - **Solubility:**
     - Water to 100 mM
     - Ethanol to 100 mM
     - DMSO to 100 mM
   - **Storage:** Desiccate at RT

2. **ANALYTICAL DATA**

   - **TLC:** \( R_{f} = 0.45 \) (Dichloromethane: Methanol: Ammonia soln. [9:1:0.1])
   - **Melting Point:** At 96°C
   - **HPLC:** Shows 100% purity
   - **\(^{1}\text{H NMR}:** Consistent with structure
   - **Microanalysis:**
     - **Theoretical:** Carbon 63.54, Hydrogen 7.38, Nitrogen 11.4
     - **Found:** Carbon 63.6, Hydrogen 7.39, Nitrogen 11.39

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Name: Medetomidine hydrochloride
Catalog No.: 2023  Batch No.: 1

Description:
Potent, highly selective α2-adrenoceptor agonist (Kᵢ values are 1.08 and 1750 nM for α₂- and α₁-adrenoceptors respectively). Displays greater selectivity over α₁-adrenoceptors than clonidine and UK 14,304 (1620-, 220- and 300-fold respectively). Inhibits twitch response in electrically stimulated mouse vas deferens (pD₂ = 9.0). Active in vivo; displays hypotensive, bradycardic, sedative, anxiolytic, hypothermic and analgesic effects.

Physical and Chemical Properties:
Batch Molecular Formula: C₁₉H₁₇N₂.HCl.½H₂O
Batch Molecular Weight: 245.75
Physical Appearance: White solid
Minimum Purity: >99%
Batch Molecular Structure:

Storage: Desiccate at RT

Solubility & Usage Info:
- water to 100 mM
- ethanol to 100 mM
- DMSO to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

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: