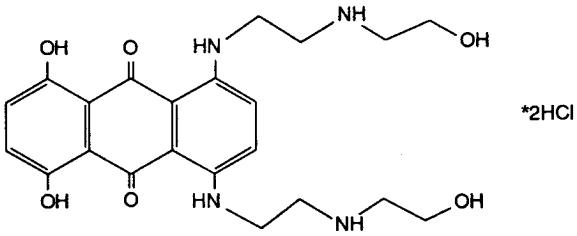
# MITOXANTRONE HYDROCHLORIDE

## NSC - 301739




**Chemical Name:**
1,4-Dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione, dihydrochloride

**Other Names:**
CL 232,315; DHAQ; DHAD; Dihydroxyanthracenedione dihydrochloride

**CAS Registry Number:** 70476-82-3

**Molecular Formula:** $C_{22}H_{28}N_4O_6 \cdot 2HCl$ **M.W.:** 517.4

| **Approximate Solubility:** | (mg/mL) |
|---|---|
| $H_2O$ | 5 - 10 |
| pH 4 Acetate buffer | 3 - 5 |
| pH 9 Borate buffer | < 1 |
| 0.1 N HCl | 1 - 3 |
| 0.1 N NaOH | decomposes |
| 10% Ethanol | 3 - 5 |
| 95% Ethanol | < 1 |
| Methanol | < 1 |

**Stability:**

**Bulk:**
After 30 days at 60 °C, no decomposition was observed (UV or TLC).

**Solution:**
The solution undergoes 6% decomposition in $H_2O$ over 5 days (UV).

**Ultraviolet Absorption:**

(Methanol)

| $\lambda_{max}$ | $\varepsilon$ |
|---|---|
| 670 ± 2 nm | 25,230 - 25,270 |
| 617 ± 2 nm | 19,850 - 19,930 |
| 277 ± 2 nm | 13,360 - 13,400 |
| 241 ± 2 nm | 40,000 - 40,920 |

**High Performance Liquid Chromatography:**

| | |
|---|---|
| **Column:** | μPhenyl Porasil, 300 x 4 mm i.d. |
| **Mobile Phase:** | $CH_3OH$/1.5% acetic acid in $H_2O$ with 0.005 M heptanesulfonic acid, 50/50, v/v |
| **Flow Rate:** | 1.5 mL/min |
| **Detection:** | UV at 254 nm |
| **Sample Preparation:** | Sample solvent - $CH_3OH$/pH 4 acetate buffer, 25/75, v/v |

**Internal Standard:** Hexaphenone 15 μL/L sample solvent

**Retention Volume:** 16.5 mL (NSC-301739)
36 mL (I.S.)