TOCRIS a bio-techne brand

Print Date: Dec 8th 2022

Certificate of Analysis

www.tocris.com

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-imidazolinedione sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_9N_4NaO_5.4H_2O$

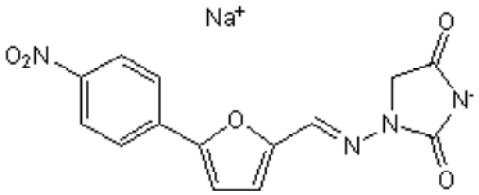
Batch Molecular Weight: 408.29

Physical Appearance: Orange solid

Solubility: DMSO to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	41.19	4.2	13.72
Found	41.42	4.03	13.67

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

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Name: **Dantrolene, sodium salt** **Catalog No.: 0507** **5**

CAS Number: 14663-23-1 EC Number: 238-706-8

IUPAC Name: 1-[[[5-(4-Nitrophenyl)-2-furanyl]methylene]amino]-2,4-imidazolinedione sodium salt

Description:

Inhibits release of Ca^{2+} from sarcoplasmic reticulum via inhibition of ryanodine 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:

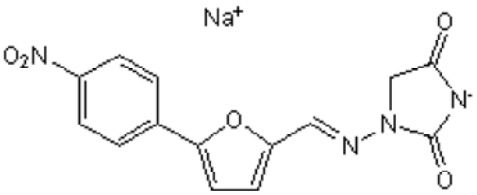
Batch Molecular Formula: $C_{14}H_9N_4NaO_5.4H_2O$

Batch Molecular Weight: 408.29

Physical Appearance: Orange solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

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:

Zhao *et al* (2001) Dantrolene inhibition of ryanodine receptor Ca^{2+} release channels. J.Biol.Chem. ***276*** 13810. PMID: 11278295.

O'Mara *et al* (1995) Dantrolene inhibits long-term depression and depotentiation of synaptic transmission in the rat dentate gyrus. Neuroscience ***68*** 621. PMID: 8577362.

Hotchkiss and Karl (1994) Dantrolene ameliorates the metabolic hallmarks of sepsis in rats and improves survival in a mouse model of endotoxemia. Proc.Natl.Acad.Sci.U.S.A. ***91*** 3039. PMID: 8159702.