

Certificate of Analysis

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Product Name: 1M7

Catalog No.: 6602

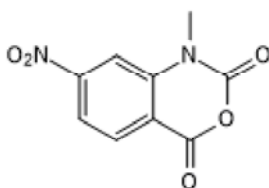
Batch No.: 2

CAS Number: 73043-80-8

IUPAC Name: 1-Methyl-7-nitro-2*H*-3,1-benzoxazine-2,4(1*H*)-dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₆N₂O₅
Batch Molecular Weight: 222.15
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 97.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.66	2.72	12.61
Found	48.64	2.75	12.67

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

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CAS Number: 73043-80-8

IUPAC Name: 1-Methyl-7-nitro-2H-3,1-benzoxazine-2,4(1H)-dione

Description:

Reagent for RNA SHAPE-MaP experiments. Enables analysis of RNA secondary structures at single nucleotide resolution in <70 seconds.

Physical and Chemical Properties:

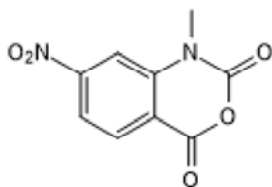
Batch Molecular Formula: C₉H₆N₂O₅

Batch Molecular Weight: 222.15

Physical Appearance: Yellow solid

Minimum Purity: >95%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 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:

Smola *et al* (2015) Detection of RNA-Protein interactions in living cells with SHAPE. *Biochemistry* **54** 6867. PMID: 26544910.

Siegfried *et al* (2014) RNA motif discovery by SHAPE and mutational profiling (SHAPE-MaP). *Nat.Methods* **11** 959. PMID: 25028896.

Turner *et al* (2013) Safer one-pot synthesis of the 'SHAPE' reagent 1-methyl-7-nitroisatoic anhydride (1m7). *RNA* **19** 1857. PMID: 24141619.

Mortimer *et al* (2007) A fast-acting reagent for accurate analysis of RNA secondary and tertiary structure by SHAPE chemistry. *J.Am.Chem.Soc.* **129** 4144. PMID: 17367143.

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