

Certificate of Analysis

Print Date: Mar 22nd 2022

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Product Name: Flutamide Catalog No.: 4094 Batch No.: 3

CAS Number: 13311-84-7 EC Number: 236-341-9

IUPAC Name: 2-Methyl-*N*-(4-nitro-3-[trifluoromethyl]phenyl)propanamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{11}H_{11}F_3N_2O_3$.

Batch Molecular Weight: 276.21

Physical Appearance: Pale yellow solid

Solubility: DMSO to 100 mM ethanol to 100 mM

Storage: Store at RT

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 47.83 4.01 10.14 Found 47.66 3.86 9.98



Product Information

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IUPAC Name: 2-Methyl-*N*-(4-nitro-3-[trifluoromethyl]phenyl)propanamide

Description:

Flutamide is a non-steroidal antiandrogen; competitive antagonist of the androgen receptor. Blocks the biological activity of testosterone in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₁₁H₁₁F₃N₂O₃.

Batch Molecular Weight: 276.21

Physical Appearance: Pale yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:

Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM ethanol 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:

Foster *et al* (2011) Drug safety is a barrier to the discovery and development of new androgen receptor antagonists. Prostate **71** 480. PMID: 20878947.

Butcher *et al* (2007) Induction of human arylamine *N*-acetyltransferase type I by androgens in human prostate cancer cells. Cancer Res. *67* 85. PMID: 17210686.

Sufrin and Coffey (1976) Flutamide. Mechanism of action of a new nonsteroidal antiandrogen. Invest. Urol. 13 429. PMID: 1270239.