

# Certificate of Analysis

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**Product Name:** MFZ 10-7

**Catalog No.:** 4438

**Batch No.:** 1

**CAS Number:** 1779796-36-9

**IUPAC Name:** 3-Fluoro-5-[2-(6-methyl-2-pyridinyl)ethynyl]benzonitrile hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>15</sub>H<sub>9</sub>FN<sub>2</sub>.HCl.¼H<sub>2</sub>O

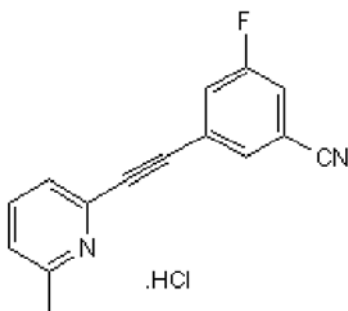
**Batch Molecular Weight:** 277.2

**Physical Appearance:** Off-white solid

**Solubility:** DMSO to 100 mM  
ethanol to 100 mM

**Storage:** Store at +4°C

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.9% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen		
Theoretical	64.99	3.82	10.11
Found	64.85	3.79	10.28

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

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**Description:**

High affinity negative allosteric modulator at the mGlu<sub>5</sub> receptor ( $K_i = 0.67$  nM). Potently inhibits mGlu<sub>5</sub> glutamate-mediated calcium mobilization ( $IC_{50} = 1.22$  nM). Inhibits cocaine-taking and cocaine-seeking behavior in rats.

**Physical and Chemical Properties:**

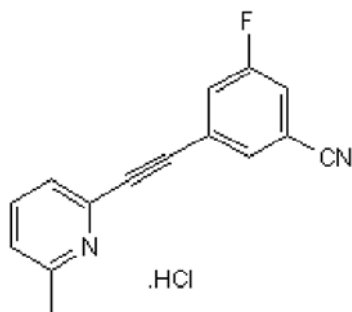
Batch Molecular Formula: C<sub>15</sub>H<sub>9</sub>FN<sub>2</sub>.HCl.¼H<sub>2</sub>O

Batch Molecular Weight: 277.2

Physical Appearance: Off-white solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**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:**

**Keck *et al*** (2014) A novel mGluR5 antagonist, MFZ 10-7, inhibits cocaine-taking and cocaine-seeking behavior in rats. *Addict.Biol.* **19** 195. PMID: 24001208.

**Keck *et al*** (2012) Metabotropic glutamate receptor 5 negative allosteric modulators as novel tools for in vivo investigation. *ACS Med.Chem.Lett.* **3** 544. PMID: 22924094.

**Alagille *et al*** (2011) Potent mGluR5 antagonists: pyridyl and thiazolyl-ethynyl-3,5-disubstituted-phenyl series. *Bioorg.Med.Chem.Lett.* **21** 3243. PMID: 21546249.

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