

### Certificate of Analysis

<b>Product Name</b>	Naltrexone-d4 (naltrexone D4)
<b>Catalog No.</b>	V69971
<b>Batch No.</b>	V6997101

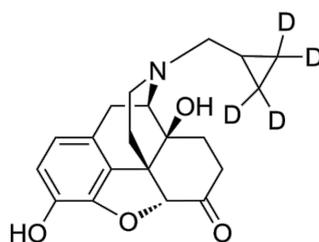
#### 1. Physical and Chemical Properties

<b>Appearance</b>	powder
<b>Molecular Formula</b>	C <sub>20</sub> H <sub>19</sub> D <sub>4</sub> NO <sub>4</sub>
<b>Molecular Weight</b>	345.43
<b>Purity</b>	≈98.66%
<b>CAS No.</b>	2070009-29-7
<b>Production Date</b>	2025-07-18
<b>Retest Date</b>	2025-07-18

#### 2. Analytical Data

Test Item	Specification	Result
<b>Solubility</b>		Methanol (Soluble)
<b>Chemical Purity (by HPLC)</b>	≥98%	98.66%
<b>Mass Isoisope Purity (by HNMR):</b>	≥98%	99.56%,D4:98.39%;D3:1.46%;D2:0.15%
<b>HNMR</b>	Consistent with structure	Conforms
<b>Mass Spectrometry (LCMS)</b>	Consistent with structure	Conforms

#### 3. Structure



#### 4. Storage Condition

<b>Storage Condition</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month

Products are for research use only • Not for human or veterinary use