



## CERTIFICATE OF ANALYSIS

<b>PRODUCT:</b>	<b><i>nor</i>-Binaltorphimine dihydrochloride</b> [17,17'-(Dicyclopropylmethyl)-6,6',7,7'-6,6'- imino-7,7'-binorphinan-3,4',14,14'-tetrol dihydrochloride], C <sub>40</sub> H <sub>43</sub> N <sub>3</sub> O <sub>6</sub> •2HCl, M.W. 734.71
<b>PRODUCT NUMBER:</b>	B-1027
<b>LOT NUMBER:</b>	B1145
<b>APPEARANCE:</b>	White solid
<b>SOLUBILITY:</b>	Soluble in water to 50mM
<b>HPLC (RP):</b>	> 98%
<b>NMR (<sup>1</sup>H, 300MHz, D<sub>2</sub>O):</b>	Consistent with structure
<b>MICROANALYSIS:</b>	Consistent with the batch molecular formula
<b>RP-TLC (3:1:0.4 CAN/water/NH<sub>4</sub>OH):</b>	R <sub>f</sub> = 0.19 visualized by UV
<b>STORAGE &amp; HANDLING:</b>	Store at +4°C, desiccated.

CAUTION: For laboratory research & scientific manufacturing use only. Not for human or drug use. The pharmacological and toxicological properties of this product have not been fully investigated. Use caution when handling. Do not use this compound if you are not fully trained or are unaware of the hazards involved.

Verified: KT