

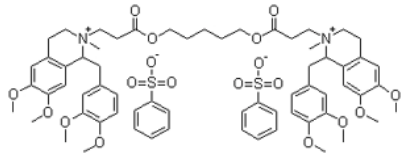
**HANGZHOU DINGYAN CHEM CO., LTD**

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**CERTIFICATE OF ANALYSIS**

NO: DYC021312111

<b>Product name</b>	<b>Atracurium Besylate</b>
<b>CAS Number</b>	<b>64228-81-5</b>
<b>Molecule Structure</b>	
<b>Molecule Formula</b>	<b>64228-81-5</b>
<b>Batch No.</b>	<b>20130825</b>
<b>Manuf. Date</b>	<b>2013-08-25</b>
<b>Testing Date:</b>	<b>2013-08-26</b>

<b>Items</b>	<b>Standard</b>	<b>Result</b>
<b>Appearance</b>	<b>White to yellowish-white powder</b>	<b>Conforms</b>
	<b>Very soluble in ethanol or chloroform; soluble in water and practically insoluble in ethyl ether</b>	
<b>Identification</b>	<b>(1) IR</b>	<b>Conforms</b>
	<b>(2) HPLC</b>	<b>Conforms</b>
<b>Water</b>	<b>5.0% max</b>	<b>1.6%</b>
<b>Residue on ignition</b>	<b>0.2% max</b>	<b>0.18%</b>
<b>Heavy metals</b>	<b>20ppm max</b>	<b>Conforms</b>
<b>Methyl benzenesulfonate</b>	<b>0.01% max</b>	<b>3ppm</b>
<b>Toluene</b>	<b>890ppm(ICH) max</b>	<b>96ppm</b>
<b>Chromatographic purity</b>	<b>(1) Laudanosine: 0.5% max</b>	<b>0.03%</b>
	<b>(2) Any other individual impurity 1.0% max</b>	<b>0.39%</b>
	<b>(3) Total impurities 3.5% max</b>	<b>1.7%</b>
<b>Isomer ratio</b>	<b>(1) trans-trans isomer 5.0%~6.5%</b>	<b>5.8%</b>
	<b>(2) cis-trans isomer 34.5%~38.5%</b>	<b>36.2%</b>
	<b>(3) cis-cis isomer 55.0%~60.0%</b>	<b>58.0%</b>
<b>Assay</b>	<b>96.0%~102.0%</b>	<b>99.7%</b>
<b>Residual solvents</b>	<b>(1) Dichloromethane 600ppm max</b>	<b>Undetected</b>
	<b>(2) Acetonitrile 410ppm max</b>	<b>Undetected</b>
	<b>(3) Ethyl ether 5000ppm max</b>	<b>784ppm</b>
<b>Result</b>	<b>Conforms to USP35</b>	

Hangzhou Dingyan Chem Co., Ltd.  
**QUALITY CONTROL:** Xuefen Chen  
 Quality Control  
 Signature

**CHECK:** 姚仙娟**INSPECTOR:** 刘清风