

## Certification of Analysis

<b>Product Name</b>	<i>Melanotan II Acetate</i>	<b>CAS. No.</b>	121062-08-6
<b>Molecular Formula</b>	<i>C<sub>50</sub>H<sub>69</sub>N<sub>15</sub>O<sub>9</sub></i>	<b>Batch No.</b>	2010707
<b>Molecular Weight</b>	1024.2	<b>Manufacturing Date</b>	07/07/2010
<b>Storage</b>	2~8 °C	<b>Retest Date</b>	07/06/2012
<b>Sequence</b>	Ac-Nle-Asp-His-D-Phe-Arg-Trp-Lys-NH <sub>2</sub>		
<b>TEST</b>		<b>SPECIFICATION</b>	<b>RESULT</b>
1	<b>Appearance</b>	<i>White powder</i>	<i>Conforms</i>
2	<b>Solubility</b>	<i>Soluble in water or 1% acetic acid at a concentration of <math>\geq 1\text{mg/ml}</math> to give a clear, colorless solution</i>	<i>Conforms</i>
3	<b>Identity</b>	<i>Monoisotopic Mass: 1024.2<math>\pm</math>1.0</i>	1023.7
4	<b>Specific Optical Rotation</b>	$-50.0 \sim -60.0^\circ [a]^{20}_D (c=0.5, 10\% HAc)$	$-55.66^\circ$
5	<b>Amino Acid Composition</b>	<i>Asp: 0.90~1.10</i> <i>His: 0.90~1.10</i> <i>Arg: 0.90~1.10</i> <i>Lys: 0.90~1.10</i> <i>Phe: 0.90~1.10</i> <i>Trp: Present</i>	0.98 1.02 1.02 0.98 0.97 <i>Present</i>
6	<b>Peptide Purity (By HPLC)</b>	$\geq 98.0\%$ by area integration	99.36%
7	<b>Related Substance (By HPLC)</b>	<i>Total Impurities(%) <math>\leq 2.0\%</math></i> <i>Largest Single Impurity(%) <math>\leq 1.0\%</math></i>	0.64% 0.16%
8	<b>Acetate Content</b>	$\leq 15.0\%$	8.22%
9	<b>Water Content (Karl Fischer)</b>	$\leq 8.0\%$	3.09%
10	<b>Bacterial Endotoxins</b>	$\leq 5\text{EU/mg}$	<i>Conforms</i>
11	<b>Peptide Content (N determination)</b>	$\geq 80.0\%$	87.99%
12	<b>Assay (By Anhydrous, Acetic Acid-free )</b>	95.0~105.0%	99.30%

Quality Control By Zhouzhongbing Date: 2010-07-19

Quality Assurance Department