



Hangzhou Peptidego Biotech Co.,Ltd

CERTIFICATION OF ANALYSIS

Glucagon Powder (Synthetic)	CAS: 16941-32-5
Product No.:800019	Batch No.: 17120008
Date of Mfg: Jan 29, 2018	Date of Exp: Jan 28, 2020
Sequence: His-Ser-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Tyr-Ser-Lys-Tyr-Leu-Asp-Ser-Arg-Arg-Ala-Gln-Asp-Phe-Val-Gln-Trp-Leu-Met-Asn-Thr	

Test	Specification	Result																																																								
Appearance	White or off-white powder	White powder																																																								
Solubility	Practically insoluble in Water and in most organic solvents, it is soluble in dilute mineral acids and in dilute solutions of alkali hydroxides.	conforms																																																								
MS	3482.8 ± 1.0	3482.8																																																								
Amino acid analysis	<table border="0"> <tr> <td>His</td><td>0.9-1.1</td><td>Tyr</td><td>1.7-2.2</td> </tr> <tr> <td>Asp</td><td>3.4-4.4</td><td>Lys</td><td>0.9-1.1</td> </tr> <tr> <td>Glu</td><td>2.6-3.3</td><td>Leu</td><td>1.7-2.2</td> </tr> <tr> <td>Gly</td><td>0.9-1.1</td><td>Arg</td><td>1.7-2.2</td> </tr> <tr> <td>Thr</td><td>2.6-3.3</td><td>Ala</td><td>0.9-1.1</td> </tr> <tr> <td>Phe</td><td>1.7-2.2</td><td>Val</td><td>0.9-1.1</td> </tr> <tr> <td>Ser</td><td>present</td><td>Met</td><td>0.9-1.1</td> </tr> </table> No more than the traces of other amino acids are present.	His	0.9-1.1	Tyr	1.7-2.2	Asp	3.4-4.4	Lys	0.9-1.1	Glu	2.6-3.3	Leu	1.7-2.2	Gly	0.9-1.1	Arg	1.7-2.2	Thr	2.6-3.3	Ala	0.9-1.1	Phe	1.7-2.2	Val	0.9-1.1	Ser	present	Met	0.9-1.1	<table border="0"> <tr> <td>His</td><td>1.0</td><td>Tyr</td><td>1.9</td> </tr> <tr> <td>Asp</td><td>4.1</td><td>Lys</td><td>1.0</td> </tr> <tr> <td>Glu</td><td>3.1</td><td>Leu</td><td>2.0</td> </tr> <tr> <td>Gly</td><td>1.0</td><td>Arg</td><td>2.1</td> </tr> <tr> <td>Thr</td><td>2.6</td><td>Ala</td><td>1.1</td> </tr> <tr> <td>Phe</td><td>1.7</td><td>Val</td><td>0.9</td> </tr> <tr> <td>Ser</td><td>present</td><td>Met</td><td>1.0</td> </tr> </table> Conforms	His	1.0	Tyr	1.9	Asp	4.1	Lys	1.0	Glu	3.1	Leu	2.0	Gly	1.0	Arg	2.1	Thr	2.6	Ala	1.1	Phe	1.7	Val	0.9	Ser	present	Met	1.0
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Related Substances	Unspecified impurity for each impurity: NMT1.0%	0.33%(single largest impurity)																																																								
Purity (HPLC)	NLT 98%	99.25%																																																								
Acetic acid	NMT 7.0%	4.3%																																																								
Water Content(Karl Fischer)	NMT 7.0%	4.3%																																																								
Peptide Content(N%)	NLT85%	90.4%																																																								
Bacterial endotoxins	Less than 5IU/mg	conforms																																																								
Assay	97.0%-103.0% (anhydrous and acetic acid free substance)	98.9%																																																								

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Test	Specification	Result
Residual solvent		
Methanol	NMT 3000ppm	conforms
Acetonitrile	NMT 410 ppm	
Triethylamine	NMT 320 ppm	

Storage: In an air tight container,protected from light at temperature 2-8°C.

Conclusion: the product complies with specification.

It is only supplied as chemical product.

Analysis :Janie.zhang
Date :2018.01.29

Approved by : Christ.zheng
Date :2018.01.29



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