

Certificate of Analysis

*Revised 21 July 2016

Structure: <div style="text-align: center;"> </div>	
Name	Ramipril diketopiperazine acid*
BP Name	Ramipril Impurity K
Synonym(s)	(2 <i>S</i>)-2-((3 <i>S</i> , 5 <i>αS</i> , 8 <i>αS</i> , 9 <i>αS</i>)-3-methyl-1,4-dioxodecahydro-2 <i>H</i> -cyclopenta(4,5)pyrrolo-(1,2- <i>a</i>)pyrazin-2-yl)-4-phenylbutanoic acid*
Epichem Item #	EPL-AA125 Batch 5
CAS #	108736-10-3
Molecular Formula	C ₂₁ H ₂₆ N ₂ O ₄
Molecular Weight	370.45 g/mol
Purity	99.3% (weight/weight) 100% by HPLC at 220nm (assuming all components detected with the same response factor). ¹ H NMR analysis detected 0.5% (weight/weight) acetonitrile. 0.21% water by Karl-Fisher method. 0.02% ash.
Combustion Analysis	Required (%): C:68.1; H:7.1; N:7.6. Found (%): C:68.0; H:7.0; N:7.6.
Appearance	White powder
Melting Point	172.9-177.6°C
Date of Manufacture	22 June 2016
Storage Requirements	Protect from heat, light, moisture and air
Special Precautions	This compound is for laboratory use only. Its toxicological properties may not have been fully established. It should be handled only by suitably qualified personnel.