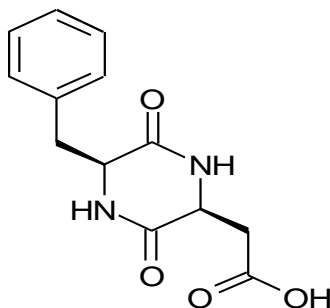


## Certificate of Analysis

**Structure:**



|                      |  |
|----------------------|--|
| Name                 | [(2S,5S)-5-benzyl-3,6-dioxopiperazin-2-yl]acetic acid  |
| Synonym(s)           | Aspartame Imp A, aspartame diketopiperazine  |
| Epichem Item #       | EPL-AA139 Batch 1  |
| CAS #                | 5262-10-2  |
| Molecular Formula    | C <sub>13</sub> H <sub>14</sub> N <sub>2</sub> O <sub>4</sub>  |
| Molecular Weight     | 262.27 g/mol   |
| Purity               | 96.8% (weight/weight)<br>100.0% by HPLC at 220nm (assuming all components detected with the same response factor).<br>No significant impurities detected by <sup>1</sup> H NMR analysis.<br>0.09% water by Karl Fischer method.<br>3.1% ash. |
| Combustion Analysis  | Required (%): C:59.5; H:5.4; N:10.7. Found (%): C:57.3; H:5.5; N:10.3.   |
| Appearance           | Off-white powder   |
| Melting Point        | 251.1-254°C  |
| Date of Manufacture  | 27 June 2013   |
| Storage Requirements | Protect from heat, light and moisture  |
| Special Precautions  | <b>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.</b>  |