



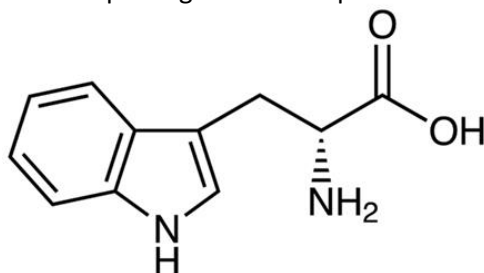
## Certificate of Analysis.

### D-(-)-Tryptophan reference standard, Anstan<sup>®</sup>.

Product code:	<b>BS13973.</b>
Description:	<b>D-(-)-Tryptophan reference standard, Anstan<sup>®</sup>.</b>
Chemical Name:	<b>(R)-(+)-2-Amino-3-(3-indolyl)propionic Acid</b>
Pack:	<b>5 gm.</b>
CAS NO.:	<b>153-94-6.</b>
Mol. Weight:	<b>204.23 g/mol.</b>
Mol. Formula:	<b>C<sub>11</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>.</b>
MDL Number:	<b>MFCD00005647.</b>
Melting point:	<b>284° C.</b>
Boiling Point:	<b>342.72°C.</b>
Density:	<b>1.1754 g/cm<sup>3</sup>.</b>
Solubility:	<b>Soluble in water.</b>
Storage:	<b>Store at ambient temperature.</b>
LOT NO.:	<b>Sample.</b>
Manufacture Date:	<b>Lot specific.</b>
Expiry Date:	<b>5 years.</b>

Test	Specification	Measured Values
Appearance:	White to Almost white powder to crystal.	<b>Lot specific.</b>
Specific Rotation ( $\alpha$ ):	+29.0 to +33.0 ° (C=1, H <sub>2</sub> O).	<b>Lot specific.</b>
Identification by NMR:	Confirms to the structure.	<b>Lot specific.</b>
Identification by MASS:	Confirms to the structure.	<b>Lot specific.</b>
Identification by IR:	Confirms to the structure.	<b>Lot specific.</b>
TGA:	<1 %.	<b>Lot specific.</b>

Please Note: - This material is only for laboratory purpose and not for human consumption. This is a computer generated COA, no stamp or signature is required.



  
**Dr. K. Deepti.**  
**Technical Head.**

