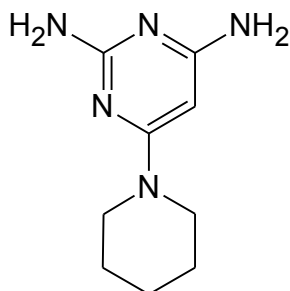


Certificate of Analysis

*Revised 16 September 2015

**Revised 6 September 2016

Structure:



Name	2,4-diamino-6-(piperidin-1-yl)pyrimidine
BP Name	Minoxidil Impurity E*
Synonym(s)	Desoxyminoxidil; 2,4-diamino-6-piperidinopyrimidine; 6-(piperidin-1-yl)-pyrimidine-2,4-diamine; 6-piperidino-pyrimidine-2,4-diyldiamine
Epichem Item #	EPL-AA81 Batch 1
CAS #	24867-26-3
Molecular Formula	C ₉ H ₁₅ N ₅
Molecular Weight	193.25 g/mol
Purity	99.3% (weight/weight) 99.8% by HPLC at 282nm (assuming all components detected with the same response factor).** ¹ H NMR analysis detected trace minoxidil. 0.3% water by Karl-Fischer method. 0.2% ash.
Combustion Analysis	Required (%): C:55.9; H:7.8; N:36.2. Found (%): C:56.1; H:7.9; N:36.4.
Appearance	Pale yellow microcrystals
Melting Point	135-136°C
Date of Manufacture	6 December 2010
Storage Requirements	Protect from heat, light and moisture
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.

John Moursounidis, PhD
Head Fine Chemicals and Technical Services
6 September 2016