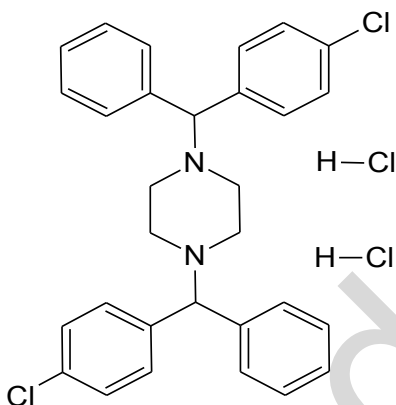


## Certificate of Analysis

**Structure:**



Name	1,4-bis((4-chlorophenyl)phenylmethyl)piperazine dihydrochloride
BP Name	Cetirizine Hydrochloride Impurity D dihydrochloride
Epichem Item #	EPL-AA45 Batch 2
CAS #	856841-95-7
Molecular Formula	C <sub>30</sub> H <sub>28</sub> Cl <sub>2</sub> N <sub>2</sub> ·2HCl
Molecular Weight	560.38 g/mol
Purity	97.9% (weight/weight). 99.9% at 230 nm by HPLC (assuming all components have the same response factor). Contains 0.1% acetic acid and 0.1% ethyl acetate by <sup>1</sup> H NMR analysis. 1.76% water by Karl-Fischer method. 0.07% ash.
Combustion Analysis	Required (%): C:64.3, H:5.4; N:5.0. Found (%): C:64.3; H:5.4; N:5.0
Appearance	White powder
Melting Point	195.5-217.0°C
Date of Manufacture	12 March 2015
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>