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Wanbury Limited

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| Certificate of Analysis | | | | | |
|-------------------------|--|-------------|---------------|--|--|
| Product | : Metformin Hydrochloride BP/ PhEur /USP | | | | |
| Batch No. | : ME03700814 | Mfg. Date | : Aug – 2014 | | |
| Qty. Supplied | : 1000 kg | Exp. Date | : July - 2019 | | |
| Customer Name | : R2 PHARMA | Mfg.Lic.No. | : KD-242 | | |

| Sr. No. | Tests | Observations | Specifications |
|------------|-------------------------------------|--|--|
| 01. | Appearance | White Crystals | White Crystals |
| | Solubility | Freely soluble in water, slightly soluble in alcohol | Freely soluble in water, slightly soluble in alcohol, practically insoluble in acetone and in methylene chloride |
| 02. | Identification | | |
| | B. IR Spectrum | Concordant | Infrared absorption spectrum of sample should concordant with that of Metformin hydrochloride working standard. |
| | E. Chloride | Positive | Should be positive |
| 03. | Appearance of solution | Solution is clear and | Should be clear and colourless |
| | (10% solution in water) | colourless | V |
| 04. | Impurity F | 0.018% | Not more than 0.05% w/w |
| 05. | Related substances (by HPLC) | | |
| | a) Impurity A | BDL | Not more than 0.02% w/w |
| | b) Impurity B | 0.009% | Not more than 0.05% w/w |
| | c) Unspecified impurities | 0.011% | Not more than 0.05% w/w |
| | d) Total other impurities | 0.021% | Not more than 0.2% |
| 06. | Heavy metals | Less than 10 ppm | Not more than 10 ppm |
| 07. | Loss on drying at 105°C for 5 hours | 0.20% | Not more than 0.5 % |
| 08. | Sulphated ash | 0.04% | Not more than 0.1 % |
| 09. | Assay (% on dry basis) | 99.5% | 98.5% - 101.0% w/w |
| 10. | Residual solvent | | |
| | a) Methanol | 219 ppm | Not more than 1000 ppm |
| | b) Xylene | BDL | Not more than 500 ppm |
| 11. | Bulk Density | 0.74 g/ml | 0.7 g/ml to 0.8 g/ml |

Remarks: Product Complies with B.P-2011 / PhEur –8th Edition /USP-35/Customer Specifications/COS NO.: R1-CEP 1998-079-Rev. 06

Declaration: Product is free from animal derived materials and is manufactured from synthetic sources only.

Officer
Date: 21-08-2014

Checked By:

Approved By:

Approved By:

Approved By:

Asst. Manager = QA | Compared Branch |

Date: P1-08-2014 | Granding Branch