

## CERTIFICATE OF ANALYSIS

Product: **SILDENAFIL CITRATE Ph.Eur.**  
 Code: **QCRT-0004-000** Batch number: **105111328** Batch size: **66 kg**  
 Manufacturing date: **30.11.2013** Analysis date: **17.12.2013** Retest date: **11.2016**  
 Manufacturer: **Pharmaceutical Works POLPHARMA S.A., POLAND**  
 Delivered to: **ES, META PHARMACEUTICAL INDUSTRIAL SL**

TEST	TEST METHOD	SPECIFICATION	RESULTS
Appearance	visual examination/ Ph. Eur. 5.11 *	white or almost white, slightly hygroscopic *, crystalline powder	almost white, slightly hygroscopic, crystalline powder
Solubility	Ph.Eur. 1.4	slightly soluble in water and in methanol, practically insoluble in hexane	conforms
Identification IR spectrum	Ph.Eur. 2.2.24.	comparison with reference substance spectrum of sildenafil citrate CRS	conforms
Impurity E (TLC)	Ph.Eur. 2.2.27.	not more than 0.1 %	conforms
Related substances (HPLC) - impurity A - unspecified impurity - sum of unspecified impurities - total impurities	Ph.Eur. 2.2.29.	not more than 0.3 % not more than 0.10 % not more than 0.3 % not more than 0.5 %	less than 0.05 % less than 0.05 % less than 0.05 % less than 0.05 %
Heavy metals	Ph.Eur. 2.4.8 method C	not more than 20 ppm	less than 20 ppm
Water	Ph.Eur. 2.5.12	not more than 2.5 %	0.29 %
Sulfated ash	Ph.Eur. 2.4.14	not more than 0.1 %	0.02 %
Assay calculated on the anhydrous substance (HPLC)	Ph. Eur. 2.2.29	98.0 % to 102.0 %	99.9 %
Residual solvents - methanol - ethanol - 2-propanol - dichloromethane - ethyl acetate - toluene - N,N-dimethylacetamide - acetone - benzene	POLPHARMA M/2-0048.17	not more than 300 ppm not more than 500 ppm not more than 3000 ppm not more than 60 ppm not more than 500 ppm not more than 100 ppm not more than 300 ppm not more than 100 ppm not more than 2 ppm	less than 4 ppm (DL) less than 14 ppm (DL) 783 ppm less than 1 ppm (DL) less than 7 ppm (DL) less than 1 ppm (DL) less than 7 ppm (DL) 5 ppm less than 0.1 ppm (DL)
Residual solvents - triethylamine	POLPHARMA M/2-0048.15	not more than 320 ppm	less than 32 ppm (QL)
Particle size D(v, 0.1) D(v, 0.5) D(v, 0.9)	POLPHARMA S/6-0351	for information	3.1 µm 12 µm 64 µm

\* - non - routine test

**CONCLUSION:** This material complies with the requirements of the **Ph.Eur., S/2-0048.15 ed. 02.**

Starogard Gdański, 18.12.2013

Certification Team Coordinator  
API Plant

*Orlikowska*  
**Beata Orlikowska**

18.12.2013