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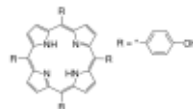
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## Certificate of Analysis

Product Name:

5,10,15,20-Tetrakis(4-hydroxyphenyl)-21H,23H-porphine - Dye content 95 %

**Product Number:** 477567  
**Batch Number:** MKBQ6916V  
**Brand:** ALDRICH  
**CAS Number:** 51094-17-8  
**MDL Number:** MFCD00191501  
**Formula:** C<sub>44</sub>H<sub>30</sub>N<sub>4</sub>O<sub>4</sub>  
**Formula Weight:** 678.73 g/mol  
**Quality Release Date:** 28 JAN 2014



Test	Specification	Result
Appearance (Color) Dark Violet or Purple	Conforms to Requirements	Dark Purple
Appearance (Form)	Powder	Powder
Infrared Spectrum	Conforms to Structure	Conforms
Proton NMR Spectrum	Conforms to Structure	Conforms
Wavelength C= 0.001 G/L Methanol	417 - 423 nm	418 nm
Extinction Coefficient	≥ 285000	446604
Carbon	73.1 - 82.5 %	76.8 %
Nitrogen	7.7 - 8.7 %	8.4 %

Jamie Gleason, Manager  
 Quality Control  
 Milwaukee, Wisconsin US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.