

## Certificate of Analysis

Product Name:

Silver nanospheres – 50 nm avg. part. size, 0.02 mg/mL in water, lipoic acid functionalized

**Product Number:** 796212  
**Batch Number:** MKBV2597V  
**Brand:** ALDRICH  
**Storage Temperature:** Store at 2 - 8 °C  
**Quality Release Date:** 23 APR 2015  
**Date Retested:** 12 APR 2021  
**Recommended Retest Date:** APR 2022

Test	Specification	Result
Appearance (Color)	Light Yellow to Yellow and Light Brown to Brown	Yellow
Appearance (Form)	Liquid	Liquid
Wavelength		420 nm
Report Result		
ICP Major Analysis	Confirmed	Confirmed
Confirms Silver Component		
Diameter		55.1 nm
Hydrodynamic (Report Result)		
Surface Area		11.6 m <sup>2</sup> /g
Report Result (TEM)		
Concentration		0.021 mg/ml
Mass (Ag)(Report Result)		
Particles/ml	Confirmed	Conforms
3.3E+ 10		
Diameter	Confirmed	Confirmed
50 nm		
Miscellaneous Supplier Data		-59.7
Zeta Potential (mV)(Report Result)		
pH		6.3
Report Result		
Silver (Ag)	Confirmed	Confirmed
99.99%		
Miscellaneous Supplier Data	Confirmed	Confirmed
Particle Surface: Lipoic Acid		

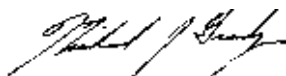
Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at [Sigma-Aldrich.com](http://Sigma-Aldrich.com). For further inquiries, please contact Technical 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.



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Product Number: 796212  
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Test	Specification	Result
Recommended Retest Period 12 month	-----	-----



Michael Grady, Manager  
Quality Control  
Milwaukee, WI US

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