

## CERTIFICATE OF ANALYSIS

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by TUV SUD America Inc.  
 Certificate Number. 951001163

Catalogue Number	087614
Lot Number	M08M044
Description	Bromine liquid, 99.99+% (metals basis)
CAS Number	7726-95-6
Quality Test/Release Date	09/Jan/2026
Suggested retest date	09/Jan/2031
Country of Origin	United States

Result Name	Units	Specifications	Test Value
Assay	%	Free Chlorine $\leq$ 0.05 %	<0.01
Assay	%	Iodine $\leq$ 0.001 %	<0.001
Assay	ppm	Nickel (Ni) $\leq$ 5 ppm	<5
Assay	%	Purity Based on Trace Metals Analysis $\geq$ 99.99% : Meets Requirements	$\geq$ 99.99
Assay	%	Sulfur Compounds $\leq$ 0.001 %	<0.001
Assay (special)	%	Titration by Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> $\geq$ 99.5 %	100.0
Appearance (Color)		Very Dark Red-Brown	Very dark red
Form		Liquid	Liquid
Heavy Metals (as Pb)	ppm	Heavy Metals (as Lead) $\leq$ 2 ppm	<1
Residue on Evaporation	%	Residue on Evaporation $\leq$ 0.005 %	<0.001
Trace Metals	ppm	Trace Metal Analysis $\leq$ 100.0 ppm	28.3

Additional Information Ca 3.8 , Co 0.1 , Pb 1.9 , Zn 22.5 , Values given in ppm unless otherwise stated.



Derek Roy  
 Quality Manager, LCD

Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third-party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of the catalogue number listed above.