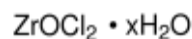


Certificate of Analysis

Product Name:

Zirconyl chloride hydrate - 99.99% trace metals basis

Product Number: 205028
Batch Number: MKBR6164V
 Brand: ALDRICH
 CAS Number: 15461-27-5
 MDL Number: MFCD00149897
 Formula: Cl₂OZr · xH₂O
 Formula Weight: 178.13 g/mol
 Quality Release Date: 15 MAY 2014



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Conforms to Requirements	Powder
Powder, Crystalline Powder or Needles and/or Chunks		
Titration by AgNO ₃	21.0 - 24.5 %	23.3 %
% Cl		
ICP Major Analysis	Confirmed	Conforms
Confirms Zirconium Component		
Purity	Meets Requirements	Meets Requirements
99.99% Based on Trace Metals Analysis		
Trace Metal Analysis	≤ 150.0 ppm	48.6 ppm
Silver (Ag)		< 2.5 ppm
Aluminum (Al)		0.3 ppm
Arsenic (As)		< 5.7 ppm
Boron (B)		3.6 ppm
Calcium (Ca)		3.8 ppm
Cadmium (Cd)		< 25.0 ppm
Copper (Cu)		0.1 ppm
Lithium (Li)		2.0 ppm
Manganese (Mn)		0.1 ppm
Palladium (Pd)		< 4.7 ppm
Titanium (Ti)		0.2 ppm
Zinc (Zn)		0.6 ppm

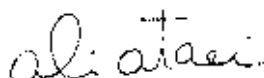
Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser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

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Certificate of Analysis

Product Number: 205028
Batch Number: MKBR6164V



Ali Ataei, Manager
Quality Control
Milwaukee, WI US

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