

## Certificate of Analysis

Date of Testing: 2022-12-08 20:01:34  
 Date of Next Testing: 2026-12-07 20:01:34  
 Product Name: **1-Pentanol**  
 CAS Number: 71-41-0  
 Specifications & Purity: high-purity , >99.5%(GC)  
 Lot #: L2206663  
 SKU #: **P108126**  
 Analysis: **160814**

Parameter	Limit Values	Result
Calcium(Ca)	0-50 (%)	3.85 %
Iron(Fe)	0-50 (%)	2.63 %
Chromium(Cr)	0-0.02 (ppm)	0.01 ppm
Boron(B)	0-0.02 (ppm)	0.02 ppm
Water by Karl Fischer	0-0.1 (%)	0.05 %
Zinc(Zn)	0-10 (%)	2.52 %
Cobalt(Co)	0-0.02 (ppm)	0.02 ppm
Barium(Ba)	0-10 (%)	2.52 %
Aluminum(Al)	0-50 (%)	3.85 %
Sn (Tin)	0-10 (%)	2.37 %
Nickel(Ni)	0-0.02 (ppm)	0.01 ppm
Manganese(Mn)	0-0.02 (ppm)	0.02 ppm
Magnesium(Mg)	0-10 (%)	3.15 %
Evaporation Residue	0-0.005 (%)	0.00 %
Valerian aldehyde (GC)	0-0.1 (%)	0.04 %
(Pb)Lead	0-10 (%)	3.51 %
Cadmium(Cd)	0-5 (%)	1.52 %
Purity(GC)	99.5-100 (%)	99.94 %
free acid (as CH <sub>3</sub> COOH)	0-0.005 (%)	0.00 %
Copper(Cu)	0-0.02 (ppm)	0.01 ppm
Appearance (P108126)	Colorless liquid	Colorless liquid
Infrared spectrum	Conforms to Structure	Conforms to Structure
Readily carbonizable substance	pass	Pass



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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager