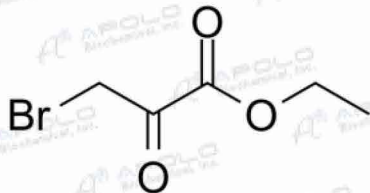


CERTIFICATE OF ANALYSIS

Product Name: 3-Bromo-2-oxopropanoic acid ethyl ester

Chemical Structure:



Lot Number: 1110601CSW008597

CAT Number: APL-CCPE-0070235

CAS Registry Number: 70-23-5

Manufacture Date: 07/2021

Expiry Date: 07/2024

Molecular Formula: C₅H₇BrO₃

Molecular Weight: 195.01

Storage: 2-8°C

Analysis Data

Item	Specification	Results
Appearance	Colorless to light yellow (Liquid)	Conforms
Purity (NMR)	≥ 80.0 %	80.0 %
¹ H-NMR Spectrum	Consistent with the structure	Conforms
Water(KF)	< 0.5 %	0.16 %

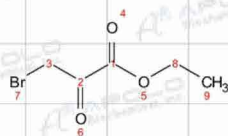
The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Jennifer LaBrecque

Jennifer LaBrecque 08/2021
Quality Assurance Manager

Conclusion: The above product meets the specifications of APOLO

CAS NO. : 70-23-5, CDCL₃



¹H NMR (400 MHz, Chloroform-d) δ 4.41 (q, $J = 7.2$ Hz, 2H), 4.29 (s, 2H), 1.40 (t, $J = 7.2$ Hz, 3H).

