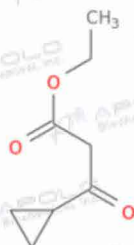


CERTIFICATE OF ANALYSIS

Product Name: Ethyl 3-cyclopropyl-3-oxopropanoate

Chemical Structure:



Lot Number: AZF214166891AG002PVK

CAT Number: APL-2492202

CAS Registry Number: 24922-02-9

Manufacture Date: 12/2021

Expiry Date: 12/2023

Molecular Formula: C₈H₁₂O₃

Molecular Weight: 156.1800

Storage: RT

Analysis Data

Item	Specification	Results
Appearance	colorless and transparent liquid	Conforms
¹ H NMR Spectrum	Consistent with the structure	Conforms
Purity (NMR)	≥ 97 %	97 %

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

Jennifer LaBrecque 01/2022
Quality Assurance Manager

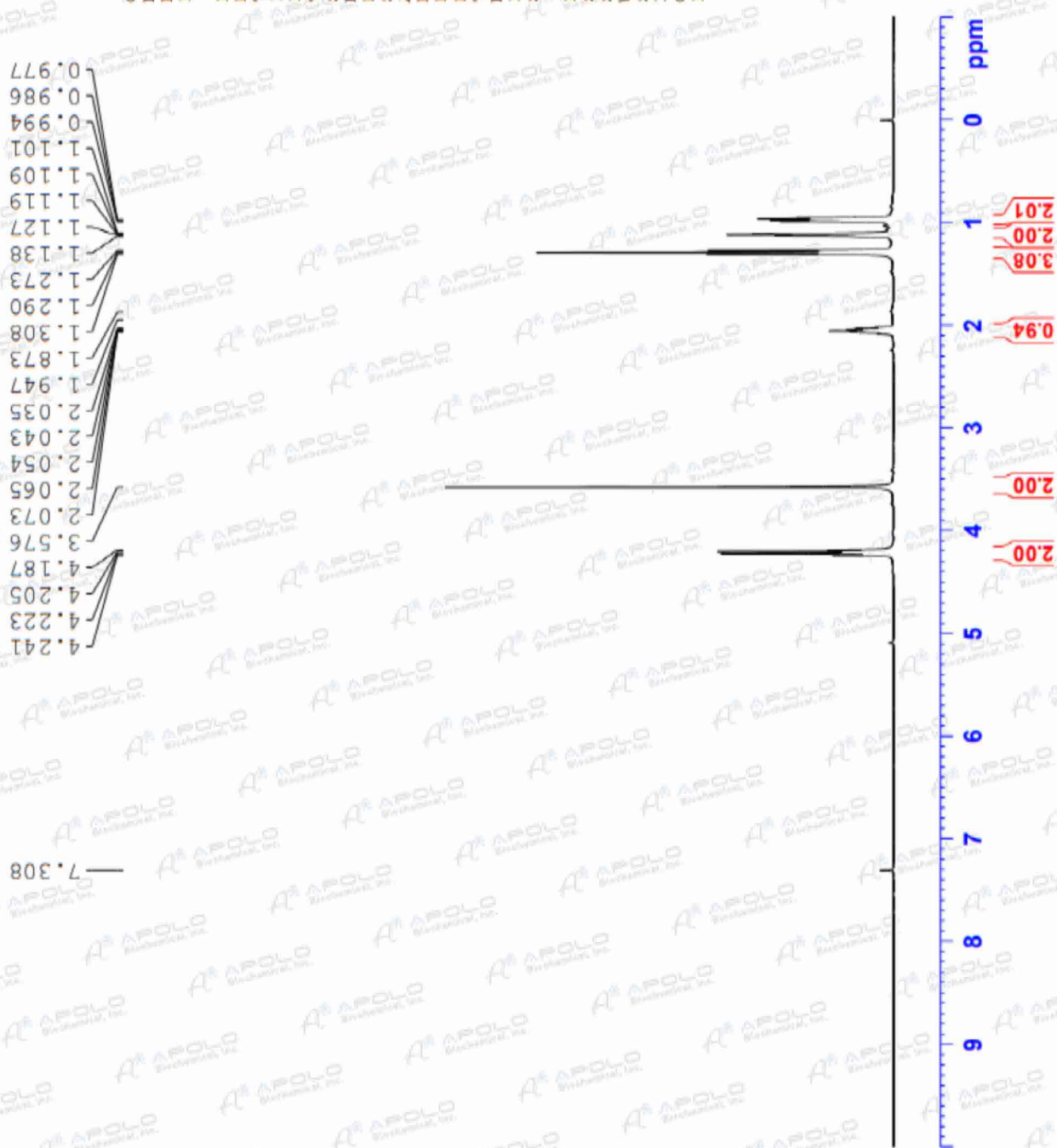
Conclusion: The above product meets the specifications of APOLO

AZF21-416689-1 HNMR in CDC13

Current Data Parameters
NAME AZF21-416689-1
EXPNO 11
PROCNO 1

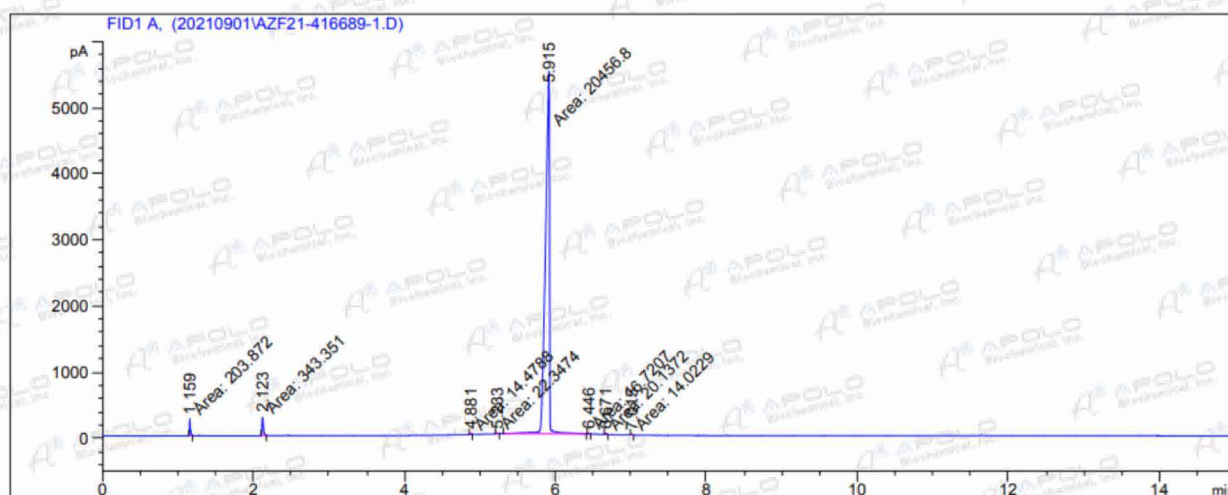
F2 - Acquisition Parameters
Date_ 20210827
Time_ 11.46
INSTRUM WNMN-1-400MHZ
PULPROG zgpg30
TD 3860
SOLVENT CDC13
NS 32
DS 0
SWH 9715.024 Hz
AQ 1.9999950 sec
RG 41.9
DM 51.467 usec
DE 30.00 usec
TE 297.6 K
NUC1 1H
PL1 120.00 dB
SFO1 399.8316015 MHz

F2 - Processing parameters
SI 131072
SF 399.8277207 MHz
WDW EM
SSB 0
LB 0.1
GB 1.00
PC 1.00



Data File C:\CHEM32\1\DATA\20210901\AZF21-416689-1.D
Sample Name: AZF21-416689-1

```
=====
Acq. Operator   : 
Acq. Instrument : Instrument 1          Location : Vial 1
Injection Date  : 9/1/2021 2:07:31 PM Inj       : 1
                                           Inj Volume : Manually
Acq. Method     : C:\CHEM32\1\METHODS\AZF21-416689-1.M
Last changed    : 9/1/2021 2:00:05 PM
Analysis Method : C:\CHEM32\1\METHODS\NORMAL-ACN.M
Last changed    : 9/1/2021 2:23:34 PM
                  (modified after loading)
Additional Info  : Peak(s) manually integrated
=====
```



Area Percent Report

```
=====
Sorted By      : Signal
Multiplier:    : 1.0000
Dilution:      : 1.0000
Use Multiplier & Dilution Factor with ISTDs
=====
```

Signal 1: FID1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	1.159	MM	0.0132	203.87225	256.68314	0.96660
2	2.123	MM	0.0203	343.35056	281.37546	1.62789
3	4.881	MM	0.0215	14.47881	11.23805	0.06865
4	5.233	MM	0.0288	22.34739	12.94199	0.10595
5	5.915	MM	0.0622	2.04568e4	5484.44336	96.98967
6	6.446	MM	0.0242	16.72074	11.51059	0.07928
7	6.671	MM	0.0275	20.13723	12.21529	0.09547
8	7.015	MM	0.0222	14.02293	10.54981	0.06649

Totals : 2.10917e4 6080.95769