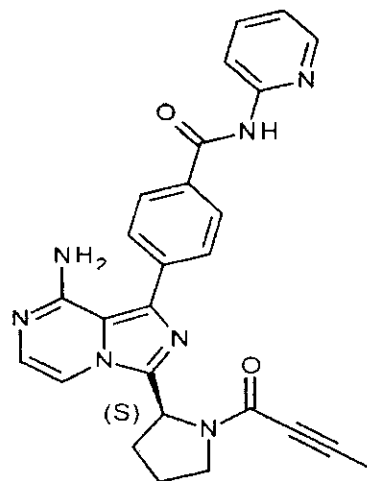


LC Laboratories®

CERTIFICATE OF ANALYSIS

Acalabrutinib, Free Base, >99%

LC LABS CAT. NO. **A-7337**
FORMULA $C_{26}H_{23}N_7O_2$
M.W. 465.51
CAS No. [1420477-60-6]
STORAGE Store at or below -20 °C***
SOLUBILITY Soluble in DMSO.



ANALYTICAL DATA

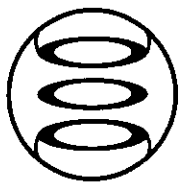
LOT NUMBER **ACL-102**
FORM Crystalline or amorphous solid; granular or powder
COLOR White or off-white to light, variable color tint
HPLC PURITY >99% (see attached chromatogram)
TLC PURITY >99% (see attached chromatogram)

<u>ELEMENTAL ANALYSIS</u>	For: $C_{26}H_{23}N_7O_2 \cdot 1.6H_2O$:	<u>Calculated</u>	<u>Found</u>
		C 63.17%	63.13%
		H 5.34%	5.32%
		N 19.83%	19.90%

***This product is stable at ambient temperature for several weeks during ordinary shipping and time spent in Customs or other delay. For long-term stability, store tightly closed at -20 °C.

Date of Manufacture: June 3, 2020

D:\COFA-BIZ\A-A-COFA\ACL102.WPD



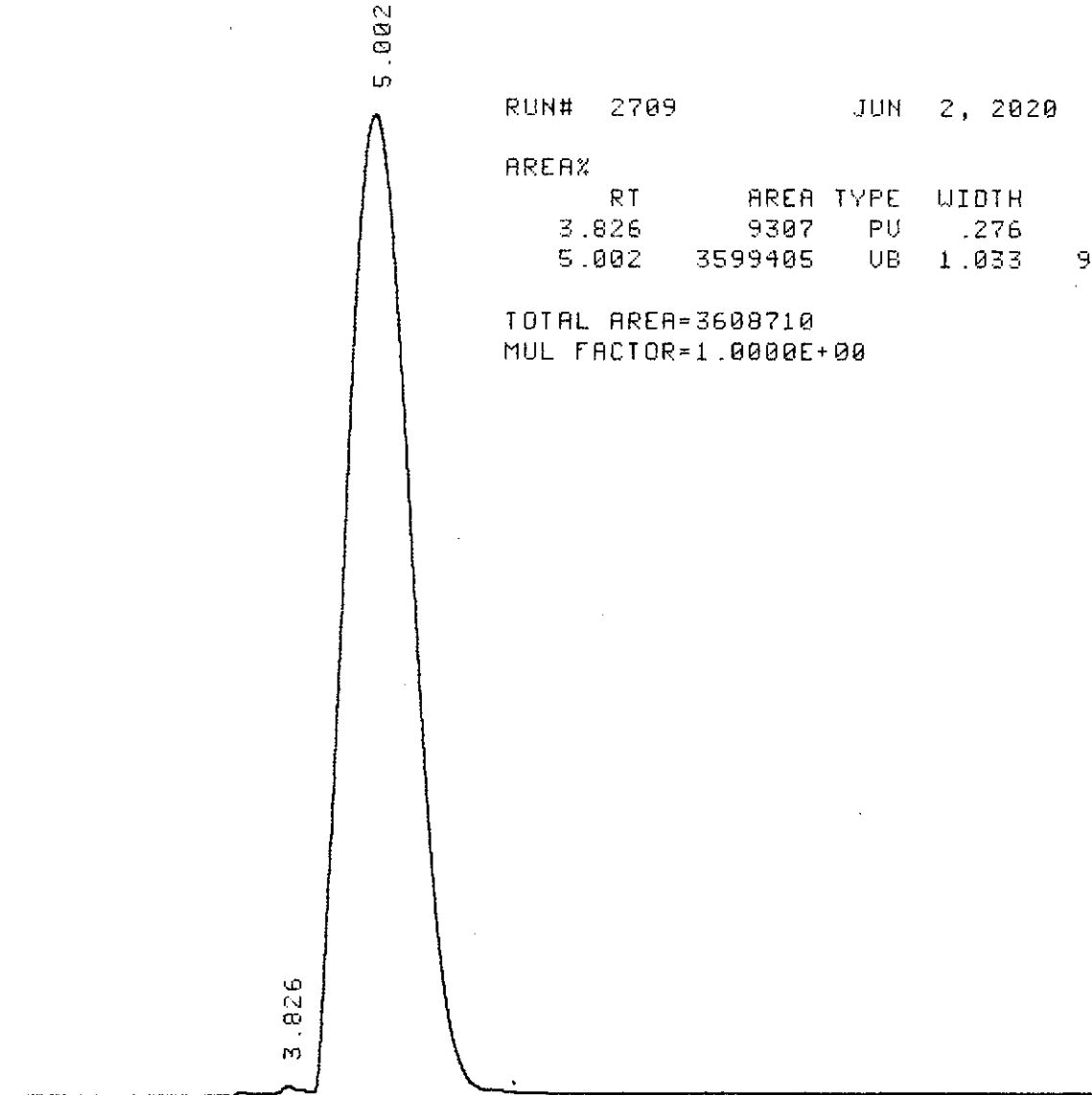
LC Laboratories®

Cat. No. A-7337
Acalabrutinib, Free Base
 Lot ACL-102
 >99%

*CAT. No. A-7337 ACALABRUTINIB, FREE BASE LOT No. ACL-102

* RUN # 2709 JUN 2, 2020 15:03:09

START



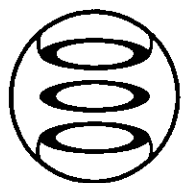
RUN# 2709 JUN 2, 2020 15:03:09

RT	AREA	TYPE	WIDTH	AREA%
3.826	9307	PU	.276	.25790
5.002	3599405	UB	1.033	99.74208

TOTAL AREA=3608710
 MUL FACTOR=1.0000E+00

TIMETABLE STOP

HPLC: YMC Basic Column, 4.6 mm x 30 cm
 Acetonitrile/Methanol/100mM Ammonium Acetate 19/19/62
 2 mL/min
 UV₂₅₄ Detection



LC Laboratories®

Cat. No. A-7337

Acalabrutinib, Free Base

Lot ACL-102

>99%



- TLC: 60 Å silica gel plates with fluorescent indicator
- Develop with Chloroform/Methanol/conc.NH₄OH 90/10/1
- Visualize via UV fluorescence quenching
- Also visualize by exposure to iodine vapor