

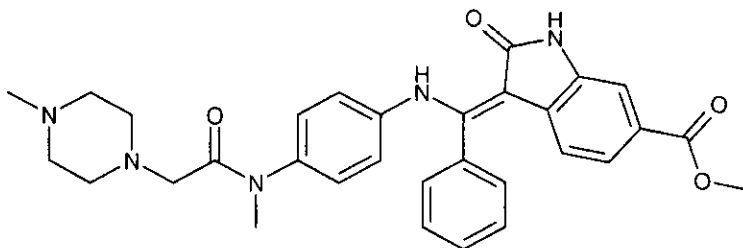
LC Laboratories®

CERTIFICATE OF ANALYSIS

Nintedanib, Free Base, >99%

(Formerly Intedanib, Free Base, or Vargatef, Free Base)

LC LABS CAT. NO. **N-9077**
FORMULA $C_{31}H_{33}N_5O_4$
M.W. 539.62
CAS NO. [656247-17-5]
STORAGE: Store at or below -20 °C***



SOLUBILITY: Soluble in DMSO at 25 mg/mL with warming; very poorly soluble in ethanol; very poorly soluble in water; maximum solubility in plain water is estimated to be about 10-20 μ M; buffers, serum or other additives may increase or decrease the aqueous solubility.

ANALYTICAL DATA

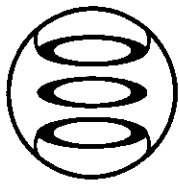
LOT NUMBER **VRG-108**
FORM Crystalline solid; granular or powder
COLOR Yellow
HPLC PURITY >99% (see attached chromatogram)
TLC PURITY >99% (see attached chromatogram)
ELEMENTAL ANALYSIS For $C_{31}H_{33}N_5O_4 \bullet 0.4H_2O$:

	<u>Calculated</u>	<u>Found</u>
C	68.09%	68.12%
H	6.23%	6.26%
N	12.81%	12.84%

***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.

Lot completion date: July 9, 2020

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Lot VRG-108

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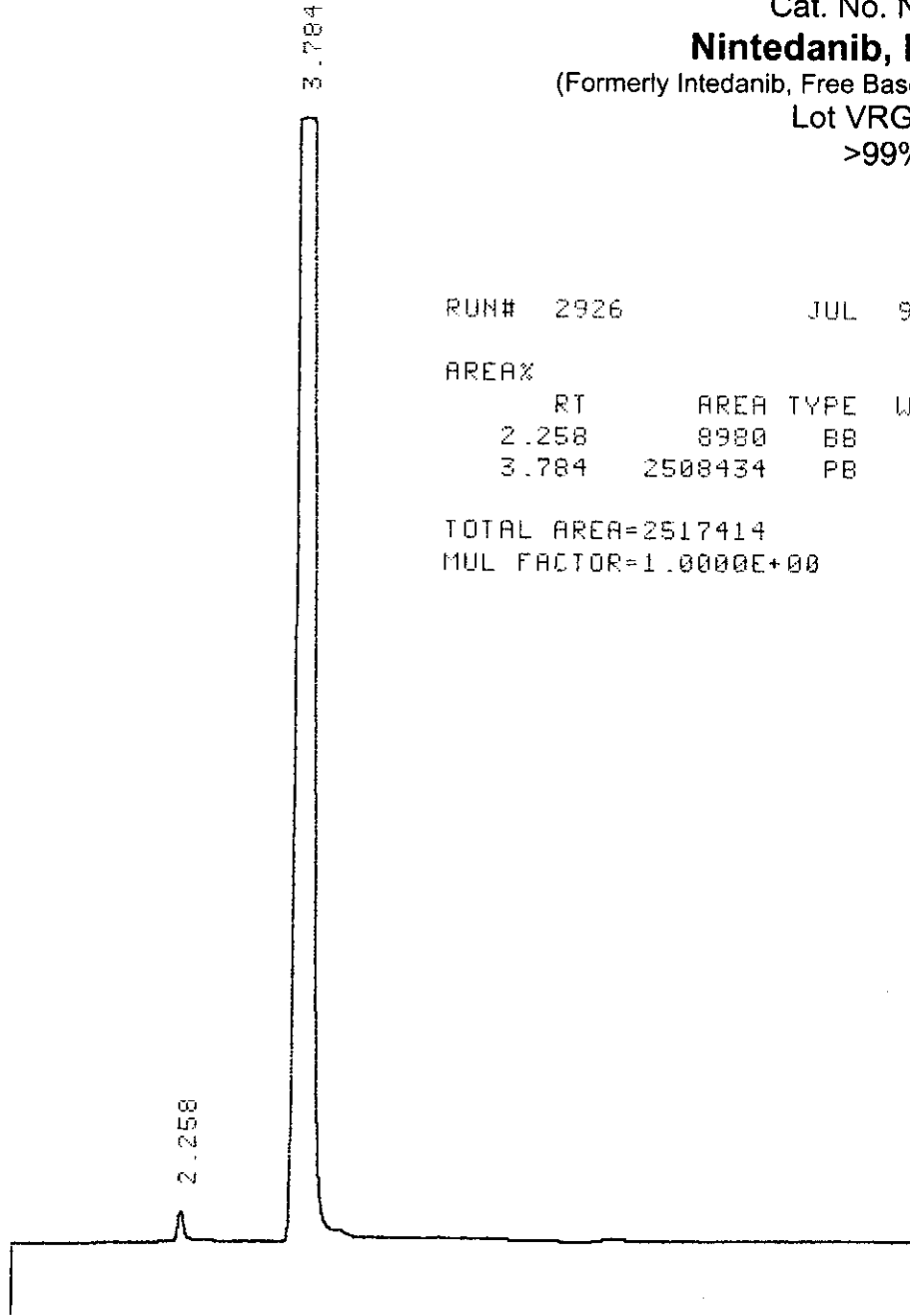
RUN# 2926 JUL 9, 2020 11:52:47

RT	AREA	TYPE	WIDTH	AREA%
2.258	8980	BB	.087	.35672
3.784	2508434	PB	.149	99.64330

TOTAL AREA=2517414
MUL FACTOR=1.0000E+00

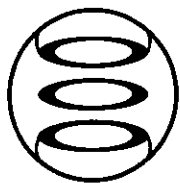
*CAT. No. N-9077 NINTEDANIB, FREE BASE LOT No. VRG-108

* RUN # 2926 JUL 9, 2020 11:52:47
START



TIMETABLE STOP

HPLC: C₁₈ Column, 4.6 mm x 30 cm
Acetonitrile/Methanol/Water/Trifluoroacetic Acid 35/5/60/0.1
2 mL/min
UV₂₅₄ Detection



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- TLC: 60 Å silica gel plates with fluorescent indicator
- Develop with Chloroform/Methanol/conc. NH₄OH 84/16/1
- Visualize via short wave UV fluorescence quenching
- Also visualize by exposure to iodine vapor