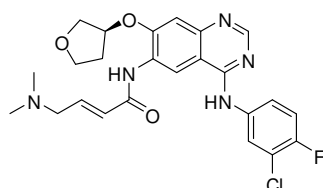


Certificate of Analysis

Axon Catalogue ID: 1544 **Batch Number:** 3
Product Name: BIBW 2992
Alternative Name(s): Afatinib
IUPAC Name: (S,E)-N-(4-(3-Chloro-4-fluorophenylamino)-7-(tetrahydrofuran-3-yloxy)quinazolin-6-yl)-4-(dimethylamino)but-2-enamide

Structure:



Amount:

CAS number(s): 850140-72-6
Molecular Formula: C₂₄H₂₅ClFN₅O₃ **Molecular Weight:** 485.94
Batch Molecular Formula: C₂₄H₂₅ClFN₅O₃.0.75H₂O **Batch Molecular Weight:** 499.45
Appearance: Beige solid **Observed mp:** 137.0 - 140.1 °C
TLC (R_f): 0.35 DCM/MeOH (9:1)
Chemical Purity: 99.3%
Optical Purity (ee): N.A.
¹H-NMR (300 MHz): Analytical data confirm chemical structure
Mass Spec: Analytical data confirm chemical structure
Microanalysis: Calculated: C 57.71, H 5.35, N 14.02; Found: C 57.51, H 5.30, N 13.89
Storage Conditions: Store at +4 °C

Solubility Data:	Solvent	Solubility (mg/ml)	Solubility (mM)	Remarks
	Water			Not Tested
	0.1N NaOH (aq)			Not Tested
	0.1N HCl (aq)	18.7	37.4	
	DMSO	40.0	80.1	
	EtOH			Not Tested

Remarks: CAS number for chemical structure with E/Z undefined: [439081-18-2]

QC Date: 18-03-2019

The purity of Axon Ligands is confirmed by HPLC, MS, NMR and/or microanalysis. Analytical data are available upon request. Request can be submitted by e-mail to info@axonmedchem.com indicating Catalogue ID and Batch number.

Caution: Not fully tested. For research purposes only