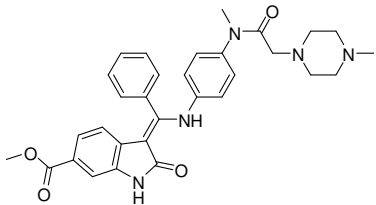




## Certificate of Analysis

|                                 |   |                                |                        |
|---------------------------------|---|--------------------------------|------------------------|
| <b>Axon Catalogue ID:</b>       | 2648  | <b>Batch Number:</b>           | 1                      |
| <b>Product Name:</b>            | Nintedanib  |                                |                        |
| <b>Alternative Name(s):</b>     | Nintedanib  |                                |                        |
| <b>IUPAC Name:</b>              | (Z)-Methyl 3-((4-(N-methyl-2-(4-methylpiperazin-1-yl)acetamido)phenylamino)(phenyl)methylene)-2-oxoindoline-6-carboxylate |                                |                        |
| <b>Structure:</b>               |    |                                | <b>Amount:</b>         |
| <b>CAS number(s):</b>           | 656247-17-5   |                                |                        |
| <b>Molecular Formula:</b>       | C31H33N5O4  | <b>Molecular Weight:</b>       | 539.62                 |
| <b>Batch Molecular Formula:</b> | C31H33N5O4.0.5H2O   | <b>Batch Molecular Weight:</b> | 548.63                 |
| <b>Appearance:</b>              | Yellow solid  | <b>Observed mp:</b>            | >260 °C (decomp)       |
| <b>TLC (R<sub>f</sub>):</b>     | 0.17  | DCM/MeOH (9:1)                 |                        |
| <b>Chemical Purity:</b>         | 99.7%   |                                |                        |
| <b><sup>1</sup>H-NMR:</b>       | Analytical data confirm chemical structure  |                                |                        |
| <b>Mass Spec:</b>               | Analytical data confirm chemical structure  |                                |                        |
| <b>Microanalysis:</b>           | Calculated: C 67.87, H 6.25, N 12.77; Found: C 68.04, H 6.07, N 12.83   |                                |                        |
| <b>Storage Conditions:</b>      | Store at +4 °C  |                                |                        |
| <b>Solubility Data:</b>         | <b>Solvent</b>  | <b>Solubility (mg/ml)</b>      | <b>Solubility (mM)</b> |
|                                 | Water   |                                |                        |
|                                 | 0.1N NaOH (aq)  |                                |                        |
|                                 | 0.1N HCl (aq)   | 10.0                           | 18.2                   |
|                                 | DMSO  | 3.2                            | 5.8                    |
|                                 | EtOH  |                                |                        |
|                                 |   |                                | Not Tested             |
|                                 |   |                                | Not Tested             |
|                                 |   |                                | Not Tested             |
| <b>Remarks:</b>                 |   |                                |                        |
| <b>QC Date:</b>                 | 7-1-2022  |                                |                        |

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](mailto:info@axonmedchem.com) indicating Catalogue ID and Batch number.

**Caution: Not fully tested. For research purposes only**