

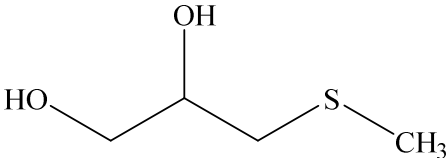
# Certificate of Analysis

Certificate No.: 20180906004

Date: September 6, 2018

Retest date: September 5, 2021

|   |   |
|---|---|
| <b>Compound Name:</b> Nifuratel Impurity 10 |   |
| <b>Synonyms:</b>                            | 3-(Methylthio)propane-1,2-diol                  |
| <b>TLC Catalogue Number:</b>                | N-4713  |
| <b>CAS Number:</b>                          | 22551-26-4                                      |
| <b>Molecular Weight:</b>                    | 122.18  |
| <b>Molecular Formula:</b>                   | C <sub>4</sub> H <sub>10</sub> O <sub>2</sub> S |
| <b>Source:</b>                              | TLC Pharmaceutical Standards                    |
| <b>Source Lot No.:</b>                      | 3136-033A3                                      |
| <b>Storage Conditions:</b>                  | Store at 2-8 °C.                                |
| <b>Solubility:</b>                          | Methanol, DMSO, Acetonitrile                    |



Chemical structure: CSCC(O)CO

| Test Description               | Specifications                 | Results         |
|--------------------------------|--------------------------------|-----------------|
| <b>Visual Description</b>      | Yellow oil                     | <b>Conforms</b> |
| <b>Identification</b>          |                                |                 |
| MS                             | Conforms to structure          | <b>Conforms</b> |
| <sup>1</sup> H NMR             | Conforms to structure          | <b>Conforms</b> |
| <b>Purity (GC)</b>             | Not less than 95.0%            | <b>98.4%</b>    |
| <b>Impurity (GC)</b>           | RT 10.23, 0.8%; RT 10.31, 0.8% |                 |
| <b>Residual Solvents (NMR)</b> | 0.2% methanol                  |                 |
| <b>Recommendation:</b>         | <b>Released.</b>               |                 |

| Name                      | Department          | Signature | Date |
|---------------------------|---------------------|-----------|------|
| Reviewed and approved by: | Analytical Services |           |      |
| Approved by:              | Quality Assurance   |           |      |

**Attachments:** GC, MS and NMR spectra.