

# RANITIDINE

|                      |                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Other names:         | 1,1-Ethenediamine,<br>N-[2-[[[5-[(dimethylamino)methyl]-2-furanyl]methyl]thio]ethyl]-N'-methyl-2-nitro-<br>N-[2-[[[5-[(dimethylamino)methyl]furan-2-yl)methyl]thio]ethyl]-N'-methyl-2-nitroethene-1,1-<br>N-[2-[[5-[(Dimethylamino)methyl]furfuryl]thio]ethyl]-N'-methyl-2-nitro-1,1-ethenediamine<br>N-[2-[[5-[(Dimethylamino)methyl]furfuryl]thio]ethyl]-N'-methyl-2-nitro-1,1-ethylenediamine |
| Inchi:               | InChI=1S/C13H22N4O3S/c1-14-13(9-17(18)19)15-6-7-21-10-12-5-4-11(20-12)8-16(2)3/h                                                                                                                                                                                                                                                                                                                 |
| InchiKey:            | VMXUWOKSQNHOCA-UKTHLTGXSA-N                                                                                                                                                                                                                                                                                                                                                                      |
| Formula:             | C13H22N4O3S                                                                                                                                                                                                                                                                                                                                                                                      |
| SMILES:              | CN/C(=C[N+](=O)[O-])NCCSCc1ccc(CN(C)C)o1                                                                                                                                                                                                                                                                                                                                                         |
| Mol. weight [g/mol]: | 314.41                                                                                                                                                                                                                                                                                                                                                                                           |

## Physical Properties

| Property code | Value   | Unit   | Source                                                   |
|---------------|---------|--------|----------------------------------------------------------|
| log10ws       | -2.50   |        | Aqueous Solubility Prediction Method                     |
| logp          | 1.459   |        | Crippen Method                                           |
| mcvol         | 239.850 | ml/mol | McGowan Method                                           |
| rinpol        | 2087.00 |        | NIST Webbook                                             |
| tf            | 406.15  | K      | Liquid pharmaceuticals formulation by eutectic formation |

## Sources

|                                                           |                                                                                                                                                                                                                         |
|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Crippen Method:                                           | <a href="http://pubs.acs.org/doi/abs/10.1021/ci990307l">http://pubs.acs.org/doi/abs/10.1021/ci990307l</a>                                                                                                               |
| Cheméo Relay (1.0):                                       |                                                                                                                                                                                                                         |
| Cheméo Relay (1.0, beta):                                 |                                                                                                                                                                                                                         |
| Liquid pharmaceuticals formulation by eutectic formation: | <a href="https://www.doi.org/10.1016/j.fluid.2017.05.009">https://www.doi.org/10.1016/j.fluid.2017.05.009</a>                                                                                                           |
| Aqueous Solubility Prediction Method:                     | <a href="http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx">http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDataset002.xlsx</a> |
| NIST Webbook:                                             | <a href="http://webbook.nist.gov/cgi/cbook.cgi?ID=C66357355&amp;Units=SI">http://webbook.nist.gov/cgi/cbook.cgi?ID=C66357355&amp;Units=SI</a>                                                                           |
| McGowan Method:                                           | <a href="http://link.springer.com/article/10.1007/BF02311772">http://link.springer.com/article/10.1007/BF02311772</a>                                                                                                   |

# Legend

|                 |                                     |
|-----------------|-------------------------------------|
| <b>log10ws:</b> | Log10 of Water solubility in mol/l  |
| <b>logp:</b>    | Octanol/Water partition coefficient |
| <b>mcvol:</b>   | McGowan's characteristic volume     |
| <b>rinpol:</b>  | Non-polar retention indices         |
| <b>tf:</b>      | Normal melting (fusion) point       |

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