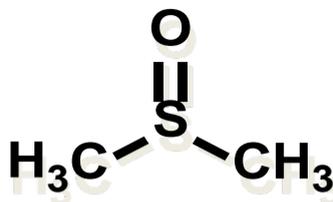


# DMSO-ExG

## (Dimethyl Sulfoxide Excipient Grade)

|                     |            |
|---------------------|------------|
| Molecular Weight    | 78.13      |
| CAS Registry Number | 67-68-5    |
| ENCS Number         | 2-1553     |
| EINECS Number       | 200-664-3  |
| TSCA                | registered |
| DSL                 | registered |



### Specification

| USP Specification                           |  |
|---|--|
| Identification (A)<br>Infrared spectroscopy | Compares with reference sample.  |
| Identification (B)                          | The retention time of the major peak of the Sensitivity solution corresponds to that of the major peak of the Sample solution, as obtained under the test for Organic Impurities.  |
| Specific gravity (25°C)                     | Between 1.095 and 1.101.   |
| Refractive index (25°C)                     | Between 1.4755 and 1.4775.   |
| Acidity                                     | Not more than 5.0 mL of 0.01 N sodium hydroxide is consumed.   |
| Water determination                         | Not more than 0.1%.  |
| Ultraviolet absorbance                      | The spectrum is smooth with no absorption maxima.<br>The absorbance at 275 nm is not more than 0.20.<br>The absorbance ratio $A_{285}/A_{275}$ is not more than 0.65.<br>The absorbance ratio $A_{295}/A_{275}$ is not more than 0.45. |
| Limit of nonvolatile residue                | The weight of the residue does not exceed 0.01%.   |
| Total impurities                            | Not more than 0.1%.  |
| Assay                                       | Not less than 99.9 percent of $C_2H_6OS$ , calculated on the anhydrous basis.  |

| Ph. Eur. Specification                               |   |
|--|---|
| Appearance   | Colourless liquid or colourless crystals, hygroscopic.  |
| First Identification (C)<br>Infrared absorption      | Compares with reference sample.   |
| Second Identification (A)<br>Relative density (20°C) | 1.100 to 1.104.   |
| Second Identification (B)<br>Refractive index (20°C) | 1.478 to 1.480.   |
| Second Identification (D)<br>Chemical Test           | The solution is greenish-yellow. Heat in a water-bath at 50 °C. The colour changes to green or bluish-green. Cool. The colour changes to greenish-yellow.   |
| Acidity  | Not more than 5.0 mL of 0.01 M sodium hydroxide is required to produce a pink colour.   |
| Freezing point                                       | Minimum 18.3 °C.  |
| Ultraviolet absorbance                               | No absorption maximum between 270 nm and 350 nm.<br>The absorbance at 275nm : not more than 0.30.<br>The absorbance at 285nm : not more than 0.20.<br>The absorbance at 295nm : not more than 0.20. |
| Related substances                                   | Unspecified impurities : for each impurity, maximum 0.10 %.<br>Total : Maximum 0.15 %.  |
| Water  | Maximum 0.2 %.  |

| Additional Information |          |
|------------------------|----------|
| Odor                   | Odorless |

Toray Fine Chemicals Co., Ltd. guarantees that the product complies with the quality and specifications described above. Toray Fine Chemicals Co., Ltd. makes no warranty with respect to fitness for use in the particular field or for any special purpose or use.