

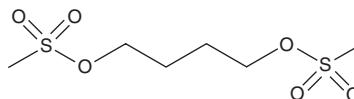
PRODUCT INFORMATION



Busulfan

Item No. 14843

CAS Registry No.: 55-98-1
Formal Name: 1,4-dimethanesulfonate 1,4-butanediol
Synonyms: Busulphan, Mielosan, Milecitan, Myeloleukon, Mylecylan, Myleran, NCI C01592, NSC 750
MF: $C_6H_{14}O_6S_2$
FW: 246.3
Purity: $\geq 98\%$
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Busulfan is supplied as a crystalline solid. A stock solution may be made by dissolving the busulfan in the solvent of choice, which should be purged with an inert gas. Busulfan is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of busulfan in these solvents is approximately 16.7 mg/ml.

Busulfan is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, busulfan should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Busulfan has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Busulfan is an alkyl sulfonate that acts as an alkylating antineoplastic agent.¹ It forms both intra- and interstrand crosslinks on DNA.²⁻³ In mammals, busulfan causes profound and prolonged reduction in the generation of hematopoietic progenitors without significantly affecting lymphocyte levels or humoral antibody responses.⁴

References

1. Appelbaum, F.R. Optimizing the conditioning regimen for acute myeloid leukemia. *Best Pract. Res. Clin. Haematol.* **22**(4), 543-550 (2009).
2. Iwamoto, T., Hiraku, Y., Oikawa, S., *et al.* DNA intrastrand cross-link at the 5'-GA-3' sequence formed by busulfan and its role in the cytotoxic effect. *Cancer Sci.* **95**(5), 454-458 (2004).
3. Ponti, M., Souhami, R.L., Fox, B.W., *et al.* DNA interstrand crosslinking and sequence selectivity of dimethanesulphonates. *Br. J. Cancer* **63**(5), 743-747 (1991).
4. Copelan, E.A. and Deeg, H.J. Conditioning for allogeneic marrow transplantation in patients with lymphohematopoietic malignancies without the use of total body irradiation. *Blood* **80**(7), 1648-1658 (1992).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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