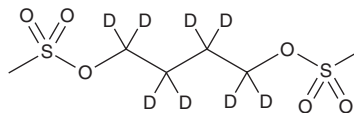


PRODUCT INFORMATION



Busulfan-d₈ Item No. 23096

CAS Registry No.: 116653-28-2
Formal Name: 1,4-butane-1,1,2,2,3,3,4,4-d₈-diol, dimethanesulfonate
Synonyms: Busulphan-d₈, Mielosan-d₈, Milecitan-d₈, Myeloleukon-d₈, Myleran-d₈
MF: C₆H₆D₈O₆S₂
FW: 254.3
Chemical Purity: ≥95% Busulfan
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
UV/Vis.: λ_{max}: 256 nm
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-d₈ is intended for use as an internal standard for the quantification of busulfan (Item No. 14843) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Busulfan-d₈ is supplied as a crystalline solid. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of busulfan-d₈ in these solvents is approximately 16.7 mg/ml.

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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