PRODUCT INFORMATION

Methylchloroisothiazolinone/Methylisothiazolinone Mixture

Item No. 10597

Synonyms: CMIT/MIT, MCI/MI, MCIT/MIT
Purity: 14% MCIT/MIT
UV/Vis.: λ_{max}: 278 nm
Supplied as: A 14% w/v aqueous solution
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

Methylchloroisothiazolinone/methylisothiazolinone mixture (MCIT/MIT) is supplied as a 14% w/v aqueous solution. To change the solvent, simply evaporate the aqueous solution under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of MCIT/MIT in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of MCIT/MIT is needed, it can be prepared by evaporating the solvent and directly dissolving the neat oil in aqueous buffers. The solubility of MCIT/MIT in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MCIT/MIT is a mixture of isothiazolinone-derived biocides.[1,2] It is effective against Gram-positive and Gram-negative bacteria with MIC values of 0.0002, 0.0002, 0.00005, and 0.00005% (w/w) for *S. aureus*, *P. aeruginosa*, *A. niger*, and *C. albicans*, respectively.[2] MCIT/MIT can elicit contact sensitization.[3] Formulations containing MCIT/MIT have been used for controlling microbial growth in industrial and household products.

References

1. Frenzel, E., Schmidt, S., Niederweis, M., *et al.* Importance of porins for biocide efficacy against *Mycobacterium smegmatis*. *Appl. Environ. Microbiol.* **77(9)**, 3068-3073 (2011).
2. Lundov, M.D., Johansen, J.D., Zachariae, C., *et al.* Low-level efficacy of cosmetic preservatives. *Int. J. Cosmet. Sci.* **33(2)**, 190-196 (2011).
3. Scherrer, M.A.R. and Rocha, V.B. Increasing trend of sensitization to methylchloroisothiazolinone/methylisothiazolinone (MCI/MI). *An. Bras. Dermatol.* **89(3)**, 527-528 (2014).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM