



## Product Information

### Tetrabutylammonium bisulfate

Product Number **T 7158**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

#### Product Description

Molecular Formula:  $\text{C}_{16}\text{H}_{36}\text{N} \cdot \text{HSO}_4$

Molecular Weight: 339.5

CAS Number: 32503-27-8

Synonym: tetrabutylammonium hydrogen sulfate

Tetrabutylammonium hydrogen sulfate is an ion pairing reagent that is used in liquid chromatography. It is frequently utilized in the analysis of pharmaceutical compounds and metabolites.<sup>1,2,3,4</sup> Tetrabutylammonium hydrogen sulfate has been shown to enhance the formation of methyl ester derivatives of haloacetic acids for GC analysis.<sup>5</sup> It has also been used in a pentafluorobenzoylation derivatization method for analysis of tryptophan and acidic tryptophan metabolites by GC/electron capture negative ion MS.<sup>6</sup>

A capillary electrophoresis and ion pairing chromatography method for the analysis of stilbenes that incorporates tetrabutylammonium hydrogen sulfate has been published.<sup>7</sup> A protocol for the cleavage of peptides from resins that uses tetrabutylammonium hydrogen sulfate has been reported.<sup>8</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is soluble in water (100 mg/ml), yielding a clear, colorless solution.

#### References

1. Gradeen, C. Y., et al., Analysis of bumetanide in human urine by high-performance liquid chromatography with fluorescence detection and gas chromatography/mass spectrometry. *J. Anal. Toxicol.*, **14(2)**, 123-126 (1990).
2. Supko, J. G., and Malspeis, L., Determination of michellamine B in biological fluids by high-performance liquid chromatography with fluorescence detection. *Anal. Biochem.*, **216(1)**, 52-60 (1994).
3. Gayden, R. H., et al., Quantitation of adenosine, inosine and hypoxanthine in biological samples by microbore-column isocratic high-performance liquid chromatography. *J. Chromatogr.*, **536(1-2)**, 265-272 (1991).
4. Dazzi, C., et al., New high-performance liquid chromatographic method for the detection of picolinic acid in biological fluids. *J. Chromatogr. B Biomed. Sci. Appl.*, **751(1)**, 61-68 (2001).
5. Sarrion, M. N., et al., *In situ* derivatization/solid-phase microextraction for the determination of haloacetic acids in water. *Anal. Chem.*, **72(20)**, 4865-4873 (2000).
6. Naritsin, D. B., et al., Pentafluorobenzoylation method for quantification of acidic tryptophan metabolites using electron capture negative ion mass spectrometry. *Anal. Chem.*, **67(5)**, 863-870 (1995).
7. Wang, S. P., and Huang, S. P., Separation of stilbenes by capillary electrophoresis and high-performance liquid chromatography. *Electrophoresis*, **22(11)**, 2222-2230 (2001).
8. Anwer, M. K., et al., Backbone modifications in cyclic peptides. Conformational analysis of a cyclic pseudopeptide containing a thiomethylene ether amide bond replacement. *Int. J. Pept. Protein Res.*, **36(4)**, 392-399 (1990).

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