**PRODUCT INFORMATION**

**Biotin sulfone**

*Item No. 34144*

**CAS Registry No.:** 40720-05-6  
**Formal Name:** (3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazole-4-pentanoic acid, 5,5-dioxide  
**MF:** C\(_{10}\)H\(_{16}\)N\(_2\)O\(_5\)S  
**FW:** 276.3  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years

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

**Laboratory Procedures**

Biotin sulfone is supplied as a solid. A stock solution may be made by dissolving the biotin sulfone in the solvent of choice, which should be purged with an inert gas. Biotin sulfone is soluble in the organic solvent DMSO at a concentration of approximately 1 mg/ml.

Biotin sulfone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, biotin sulfone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Biotin sulfone has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Biotin sulfone is an oxidized form of biotin (Item No. 22582).\(^1\) It binds to avidin with a binding ratio of 0.332 compared with biotin.\(^2\) Biotin sulfone has been used to immobilize oligosaccharides on avidin-coated surfaces for the detection of anti-*C. albicans* antibodies.\(^1\)

**References**