

## Product Information

### Sodium diatrizoate dihydrate

Product Number **S4506**  
Store at Room Temperature

#### Product Description

Molecular Formula:  $C_{11}H_8I_3N_2O_4Na \cdot 2H_2O$   
Molecular Weight: 671.93  
CAS Number: 737-31-5  
Melting Point: 261-262 °C (with decomposition)<sup>1</sup>  
Synonyms: 3,5-bis(acetylamino)-2,4,6-triiodobenzoic acid sodium salt; 3,5-diacetamido-2,4,6-triiodobenzoic acid sodium salt; sodium 3,5-diacetamido-2,4,6-triiodobenzoate; diatrizoate sodium; Hypaque<sup>®</sup> sodium<sup>1</sup>

Sodium diatrizoate is used as a density gradient reagent in blood cell separation.<sup>1</sup> The use of sodium diatrizoate in a discontinuous gradient protocol for neutrophil separation in whole blood has been described.<sup>2</sup> Sodium diatrizoate has also been utilized as a radiological contrast agent. Several studies have examined the effects of diatrizoate on mammalian cell viability, such as on cultured human vascular smooth muscle cells.<sup>3</sup>

Diatrizoate has been shown to cause partial redistribution of tight-junction-associated membrane proteins into a cytoplasmic compartment in cultured monolayer MDCK cells.<sup>4</sup> In cultured human umbilical vein endothelial cells, diatrizoate has been demonstrated to lead to concentration-dependent cell death and an opening of tight junctions.<sup>5</sup> The interaction of diatrizoate with cyclophosphamide and carmustine in a rat bone marrow cell model has been investigated.<sup>6</sup>

An investigation of the occurrence of diatrizoate in the aquatic environment has been published.<sup>7</sup>

#### Precautions and Disclaimer

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

#### Preparation Instructions

This product is soluble in water (350 mg/ml), yielding a clear to slightly hazy, colorless to faint yellow solution. The pH of a 50% solution is 7.0 - 7.5.<sup>1</sup>

Solutions of this product may be sterilized by autoclaving.

#### Storage/Stability

Solutions should be protected from light.

#### References

1. The Merck Index, 12th ed., Entry# 3040.
2. Schinella, M., Improved neutrophil separation from anti-D-treated Rh(D)-positive whole blood by a discontinuous gradient method. *Am. J. Clin. Pathol.*, **96(3)**, 391-393 (1991).
3. Wang, Y. X., et al., The effect of radiographic contrast media on human vascular smooth muscle cells. *Br. J. Radiol.*, **71(844)**, 376-380 (1998).
4. Schick, C. S., and Haller, C., Comparative cytotoxicity of ionic and non-ionic radiocontrast agents on MDCK cell monolayers *in vitro*. *Nephrol. Dial. Transplant.*, **14(2)**, 342-347 (1999).
5. Fauser, C., et al., Differential effects of radiocontrast agents on human umbilical vein endothelial cells: cytotoxicity and modulators of thrombogenicity. *Eur. J. Med. Res.*, **6(11)**, 465-472 (2001).
6. Parvez, Z., et al., Cytogenetic interactions of contrast media and antineoplastic drugs. *Invest. Radiol.*, **23(5)**, 389-393 (1988).
7. Putschew, A., et al., Occurrence of triiodinated X-ray contrast agents in the aquatic environment. *Sci. Total Environ.*, **255(1-3)**, 129-134 (2000).

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