

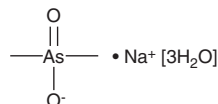
# PRODUCT INFORMATION



## Cacodylic Acid (sodium salt hydrate)

Item No. 22996

**CAS Registry No.:** 6131-99-3  
**Formal Name:** dimethyl-arsinic acid, monosodium salt, trihydrate  
**MF:**  $C_2H_6AsO_2 \cdot Na [3H_2O]$   
**FW:** 214.0  
**Purity:**  $\geq 95\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^\circ C$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Cacodylic acid (sodium salt hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the cacodylic acid (sodium salt hydrate) in the solvent of choice, which should be purged with an inert gas. Cacodylic acid (sodium salt hydrate) is soluble in organic solvents such as ethanol. It is also soluble in water. The solubility of cacodylic acid (sodium salt hydrate) in ethanol is approximately 400 mg/ml and approximately 100 g/L in water. We do not recommend storing the aqueous solution for more than one day.

### Description

Cacodylic acid has been widely used in buffers for electron microscopy techniques.<sup>1</sup> It has also been used to introduce arsenic into proteins for single-wavelength anomalous diffraction (SAD) phasing in protein crystallography.<sup>2</sup> In rats exposed to carcinogens, cacodylic acid increases the likelihood of tumor formation in the bladder, kidney, liver, and thyroid gland at concentrations as low as 50 ppm for the bladder.<sup>3</sup>

### References

1. Ref Graham, L. and Orenstein, J.M. Processing tissue and cells for transmission electron microscopy in diagnostic pathology and research. *Nat. Protoc.* **2(10)**, 2439-2450 (2007).
2. Liu, X., Zhang, H., Wang, X.J., *et al.* Get phases from arsenic anomalous scattering: *De novo* SAD phasing of two protein structures crystallized in cacodylate buffer. *PLoS One* **6(9)**, 1-8 (2011).
3. Yamamoto, S., Konishi, Y., Matsuda, T., *et al.* Cancer induction by an organic arsenic compound, dimethylarsinic acid (cacodylic acid), in F344/DuCrj rats after pretreatment with five carcinogens. *Cancer Res.* **55(6)**, 1271-1276 (1995).

#### 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.

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