

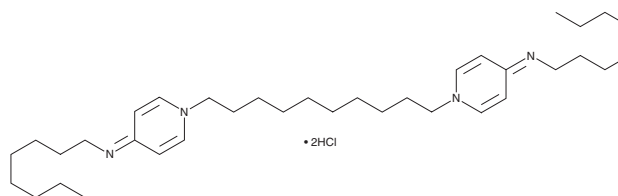
# PRODUCT INFORMATION



## Octenidine (hydrochloride)

Item No. 34238

**CAS Registry No.:** 70775-75-6  
**Formal Name:** N,N'-(1,10-decanediyl)di-1(4H)-pyridinyl-4-ylidene)bis-1-octanamine, dihydrochloride  
**Synonym:** WIN 41,464-2  
**MF:** C<sub>36</sub>H<sub>62</sub>N<sub>4</sub> • 2HCl  
**FW:** 623.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 214, 284 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Octenidine (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the octenidine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Octenidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of octenidine (hydrochloride) in these solvents is approximately 30, 5, and 10 mg/ml, respectively.

Octenidine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, octenidine (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Octenidine (hydrochloride) has a solubility of approximately 0.12 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Octenidine is an antimicrobial agent.<sup>1</sup> It is active against a variety of bacteria, including methicillin-sensitive and -resistant *S. aureus*, vancomycin-resistant *Enterococcus*, *E. faecalis*, and *S. pneumoniae* (MICs = 1-32 mg/L), and the fungus *C. albicans* (MIC = 1 mg/L). Octenidine (2 mM) reduces methicillin- or vancomycin-resistant *S. aureus* biofilm formation.<sup>2</sup> Topical application of octenidine (1%) reduces dental plaque accumulation in cynomolgus monkeys fed a high-sucrose diet.<sup>3</sup>

### References

1. Koburger, T., Hübner, N.-O., Braun, M., *et al.* Standardized comparison of antiseptic efficacy of triclosan, PVP-iodine, octenidine dihydrochloride, polyhexanide and chlorhexidine digluconate. *J. Antimicrob. Chemother.* **65(8)**, 1712-1719 (2010).
2. Amalaradjou, M.A.R. and Venkitanarayanan, K. Antibiofilm effect of octenidine hydrochloride on *Staphylococcus aureus*, MRSA and VRSA. *Pathogens* **3(2)**, 404-416 (2014).
3. Emilson, C.G., Bowen, W.H., Robrish, S.A., *et al.* Effect of the antibacterial agents octenidine and chlorhexidine on the plaque flora in primates. *Scand. J. Dent. Res.* **89(5)**, 384-392 (1981).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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