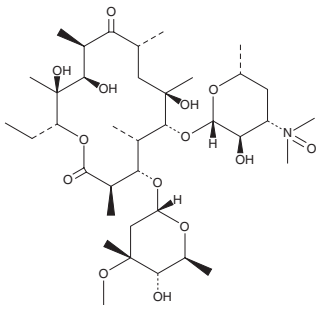
PRODUCT INFORMATION

Erythromycin A N-oxide

Item No. 23642



CAS Registry No.:	992-65-4
Formal Name:	erythromycin N-oxide
MF:	$C_{37}H_{67}NO_{14}$
FW:	749.9
Purity:	≥95%
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

Erythromycin A N-oxide is supplied as a solid. A stock solution may be made by dissolving the erythromycin A N-oxide in the solvent of choice, which should be purged with an inert gas. Erythromycin A N-oxide is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide. It is also moderately soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

Erythromycin A N-oxide is a potential impurity found in commercial preparations of erythromycin.[1] Erythromycin (Item No. 16486) is a macrolide antibiotic that inhibits bacterial protein synthesis by targeting the 50S ribosomal subunit, blocking the progression of nascent polypeptide chains.[2] It is effective against a host of bacterial genera, including *Streptococcus*, *Staphylococcus*, and *Haemophilus* (MIC_{90}s = 0.015-2.0 mg/l).[3] Erythromycin is known to potently inhibit the cytochrome P450 isoform CYP3A4, which can affect the metabolism of numerous clinically relevant medications.[4,5] Erythromycin A N-oxide is also a precursor in the synthesis of clarithromycin (Item No. 19455).[6]

References

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4. Westphal, J.F. Macrolide - induced clinically relevant drug interactions with cytochrome P-450A (CYP) 3A4: An update focused on clarithromycin, azithromycin and dirithromycin. *Br. J. Clin. Pharmacol.* **50(4)**, 285-295 (2000).
5. Bibi, Z. Role of cytochrome P450 in drug interactions. *Nutr. Metab. (Lond)* **5(27)** (2008).
6. Suh, K.-H., Seong, M.-R., Kim, N.-D., *et al.* Method of preparing clarithromycin. **US 6,809,188 B1** (2004).

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