Colistin Sodium Methanesulfonate
PRODUCT DATA SHEET

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Product Name:	Colistin Sodium Methanesulfonate
Product Number:	C073
CAS Number:	8068-28-8
Molecular Formula:	$C_{58}H_{115}N_{16}Na_5O_{28}S_5$
Molecular Weight:	1759.90
Form:	Powder
Appearance:	A white to slightly yellow fine powder
Source:	*Bacillus polymyxa*
pH:	6.5-8.5
Optical Rotation:	-46° to -51°
Storage Conditions:	2-8 °C
Description:	Colistin sodium methanesulfonate is considered an inactive prodrug of Colistin which means it is inactive until converted into Colistin by cellular enzymes. It is prepared by the reaction of colistin with formaldehyde, then sodium bisulfate. It is less potent and less toxic than colistin sulfate. Colistin targets the bacterial cell membrane, leading to reduced permeability and cell death. It is effective against Gram-negative bacteria. It is freely soluble in aqueous solution. TOKU-E offers three forms of Colistin: • Colistin sodium methanesulfonate (C073) • Colistin sulfate, USP (C083) • Colistin sulfate, EP (C039) This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for details.
Mechanism of Action:	Colistin has a bactericidal effect on bacteria by targeting the cell membrane and modifying its permeability.
Spectrum:	Colistin primarily targets and disrupts the cell wall of gram negative bacteria.

Microbiology Applications Colistin is commonly used in clinical *in vitro* microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Shigella* spp. 64 µg/mL -128 µg/mL
- *Haemophilus influenzae* 0.4 µg/mL – 0.8 µg/mL
- For a complete list of colistin MIC values, click here.

References:

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