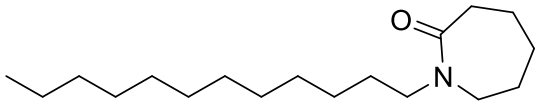
Product data sheet

MedKoo Cat#: 329889 Name: Laurocapram CAS: 59227-89-3 Chemical Formula: $C_{18}H_{35}NO$ Exact Mass: 281.2719 Molecular Weight: 281.484	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Laurocapram, also known as Azone, is a chemical enhancer for skin permeation of drug. Azone markedly fluidized liposomal lipids (as a model lipid system) compared with other enhancers. Azone increased water content in the stratum corneum, as measured by skin conductance.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	100.0	355.26

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.55 mL	17.76 mL	35.53 mL
5 mM	0.71 mL	3.55 mL	7.11 mL
10 mM	0.36 mL	1.78 mL	3.55 mL
50 mM	0.07 mL	0.36 mL	0.71 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. López-Castellano A, Cortell-Ivars C, López-Carballo G, Herráez-Domínguez M. The influence of Span20 on stratum corneum lipids in langmuir monolayers: comparison with Azone. Int J Pharm. 2000 Aug 10;203(1-2):245-53. doi: 10.1016/s0378-5173(00)00463-4. PMID: 10967446.

2. Szolar-Platzer C, Patil S, Maibach HI. Effect of topical laurocapram (Azone) on the in vitro percutaneous permeation of sodium lauryl sulfate using human skin. Acta Derm Venereol. 1996 May;76(3):182-5. doi: 10.2340/000155557682185. PMID: 8800295.

In vivo study

1. Senna TD, Mata Dos Santos HA, Kibwila DM, Leitao AC, Santos Pyrrho AD, de Padula M, Rosas EC, Padua TA, Lara MG, Riemma Pierre MB. In Vitro and In Vivo Evaluation of DMSO and Azone as Penetration Enhancers for Cutaneous Application of Celecoxib. Curr Drug Deliv. 2017;14(7):992-1004. doi: 10.2174/1567201814666170125120331. PMID: 28124617.

2. Meng-Lund E, Jacobsen J, Jin L, Janfelt C, Holm R, Müllertz A, Nicolazzo JA. Azone® decreases the buccal mucosal permeation of diazepam in a concentration-dependent manner via a reservoir effect. J Pharm Sci. 2014 Apr;103(4):1133-41. doi: 10.1002/jps.23877. Epub 2014 Feb 15. PMID: 24532052.

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7. Bioactivity

Biological target:

Laurocapram is a absorption enhancer and has been one of the most effective for substances of both lipophilic and hydrophilic nature.

In vitro activity

Pre-exposure to laurocapram enhanced penetration of SLS (sodium lauryl sulfate) compared to all other treatments ($p < 0.05$). Since subsequent pre-exposure of skin to laurocapram increased SLS penetration, the chances of an elevated skin irritation reaction at the exposed site may therefore be possible. Pre-exposure of the skin with SLS did not increase the SLS flux values significantly, compared to the laurocapram pretreated skin.

Reference: Acta Derm Venereol. 1996 May;76(3):182-5. https://pubmed.ncbi.nlm.nih.gov/8800295/

In vivo activity

In vivo anti-inflammatory tests in mice showed that ear edema could be inhibited by CXB (celecoxib) associated with 5.0% DMSO (53.0%) or 10.0% AZ (40.0%).

Reference: Curr Drug Deliv. 2017;14(7):992-1004. https://pubmed.ncbi.nlm.nih.gov/28124617/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.