Product data sheet



MedKoo Cat#: 591636				
Name: N-Butyl stearate				
CAS: 123-95-5				
Chemical Formula: $C_{22}H_{44}O_2$				
Exact Mass: 340.3341				
Molecular Weight: 340.592				
Product supplied as:	Powder			
Purity (by HPLC):	$\geq 98\%$			
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:

Butyl stearate enteric-coated tablets cause a reaction in intestinal enzymes.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.94 mL	14.68 mL	29.36 mL
5 mM	0.59 mL	2.94 mL	5.87 mL
10 mM	0.29 mL	1.47 mL	2.94 mL
50 mM	0.06 mL	0.29 mL	0.59 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. Bendic V, Dobrotă D, Simion I, Bălan E, Pascu NE, Tilina DI. Methods for Determining the Thermal Transfer in Phase-Changing Materials (PCMs). Polymers (Basel). 2020 Feb 18;12(2):467. doi: 10.3390/polym12020467. PMID: 32085434; PMCID: PMC7077708.

2. Marske F, Martins de Souza E Silva J, Wehrspohn RB, Hahn T, Enke D. Synthesis of monolithic shape-stabilized phase change materials with high mechanical stability via a porogen-assisted in situ sol-gel process. RSC Adv. 2020 Jan 16;10(6):3072-3083. doi: 10.1039/c9ra10631f. PMID: 35497767; PMCID: PMC9048775.

In vivo study

1. Sun F, Yu C, Liu X, Wang D, Liu N, Liu J, Teng L, Li Y. Butyl stearate prolongs the drug release period of isoperidone-loaded poly (lactic-co-glycolic acid) microspheres: In vitro and in vivo investigation. Mol Med Rep. 2019 Mar;19(3):1595-1602. doi: 10.3892/mmr.2018.9797. Epub 2018 Dec 24. PMID: 30592277; PMCID: PMC6390036.

7. Bioactivity

Biological target:

Butyl stearate enteric-coated tablets cause a reaction in intestinal enzymes.

In vitro activity

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Comparative analysis of the thermographs shown in Figure 1 indicated, as expected, that the sample of pure butyl stearate has the best heat storage properties. From the TGA analysis, it was observed that the mass loss is much higher and at a much lower temperature in the case of the butyl stearate sample. The butyl stearate microcapsules encapsulated in a PMMA membrane had a fairly uniform particle size distribution. Also, the co-preservation process was an appropriate one in that the PMMA layer was relatively uniform in thickness, and this was observed after electron microscopy analysis (Figure 10).

Reference: Polymers (Basel). 2020 Feb 18;12(2):467. https://pubmed.ncbi.nlm.nih.gov/32085434/

In vivo activity

In vivo pharmacokinetic study was conducted on female beagle dogs. Spherical microspheres with smooth surfaces, small internal pores and shell structures were initially prepared. It was found that 3% (w/w) butyl stearate prolonged the in vitro drug release period from 46 to 82 days, and in vivo release period from 20 to 27 days.

Reference: Mol Med Rep. 2019 Mar;19(3):1595-1602. https://pubmed.ncbi.nlm.nih.gov/30592277/

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.