

Product data sheet



MedKoo Cat#: 581226 Name: Saccharin sodium CAS#: 128-44-9 (sodium) Chemical Formula: C ₇ H ₄ NNaO ₃ S Molecular Weight: 205.16		
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:

Saccharin sodium is a type of artificial or nonnutritive sweetener. It is 200 to 700 times sweeter than sucrose but has a bitter aftertaste. Saccharin and its salts do not occur naturally. Saccharin sodium is used in the production of various foods and pharmaceutical products including soft drinks, candy, biscuits, jams, chewing gum, tinned fruit, medicine and toothpaste.

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
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.87 mL	24.37 mL	48.74 mL
5 mM	0.97 mL	4.87 mL	9.75 mL
10 mM	0.49 mL	2.44 mL	4.87 mL
50 mM	0.10 mL	0.49 mL	0.97 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

- Kim HL, Ha AW, Kim WK. Effect of saccharin on inflammation in 3T3-L1 adipocytes and the related mechanism. *Nutr Res Pract.* 2020 Apr;14(2):109-116. doi: 10.4162/nrp.2020.14.2.109. Epub 2020 Jan 21. PMID: 32256985; PMCID: PMC7075742.
- Yamashita H, Muroi Y, Ishii T. Saccharin enhances neurite extension by regulating organization of the microtubules. *Life Sci.* 2013 Nov 6;93(20):732-41. doi: 10.1016/j.lfs.2013.09.023. Epub 2013 Oct 3. PMID: 24095948.

In vivo study

- Godoi AR, Fioravante VC, Santos BM, Martinez FE, Pinheiro PFF. Maternal exposure of rats to sodium saccharin during gestation and lactation on male offspring. *Biol Reprod.* 2023 Jan 14;108(1):98-106. doi: 10.1093/biolre/ioc190. PMID: 36219170.
- Aoyama K, Nagano A. Effects of Saccharin Consumption on Operant Responding for Sugar Reward and Incubation of Sugar Craving in Rats. *Foods.* 2020 Dec 8;9(12):1823. doi: 10.3390/foods9121823. PMID: 33302497; PMCID: PMC7763677.

7. Bioactivity

Biological target:

Saccharin sodium is a sweetening and flavoring agent.

In vitro activity

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The results from this study suggest that saccharin enhances neurite extension by promoting microtubule organization. Saccharin increased the number of N1E-115 cells and total neurite length and longest neurite length in each cell. Saccharin also had a similar effect on NGF-treated PC12 cells. Saccharin increased the amount of the microtubules reconstructed after treatment with nocodazole.

Reference: Life Sci. 2013 Nov 6;93(20):732-41. <https://pubmed.ncbi.nlm.nih.gov/24095948/>

In vivo activity

This study concluded that maternal consumption of sodium saccharin during pregnancy and lactation programmed alterations in the reproductive parameters of male offspring, thus influencing spermatogenesis. There were decreases in androgen receptor and PCNA expression and quantification, tubular diameter, and luminal volume, sperm count and transit, estradiol concentration. There were also increases in epithelial and interstitial relative volumes.

Reference: Biol Reprod. 2023 Jan 14;108(1):98-106. <https://pubmed.ncbi.nlm.nih.gov/36219170/>

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.