



Wuhan Zhongke Optics Valley Green Biotechnology Co.,Ltd.

Wuhan Zhongke Optics Valley Green Biotechnology Co., Ltd. was established in December 2010 and is mainly engaged in the Research & Development, production, sales and technical services of fermentation products. It was identified as a national high-tech enterprise in October 2014. Wuhan Zhongke Optics Valley Green Biotechnology Co., Ltd. is owned by CABIO Biotech (Wuhan) Co., Ltd located in Biolake, Wuhan East Lake High-tech Development Zone. The enterprise is also the Hubei Institute of Industrial Technology Innovation and Biotechnology Engineering Center of Chinese Academy of Sciences. Based on the accumulation of technology and technological resources from the Chinese Academy of Sciences, the company provides services to customers including new products for research and development, technical engineering, technology validation and promotion service by adopting ion beam biotechnology, microbial breeding, microorganism fermentation engineering, genetic engineering and other means.

Adhering to the business philosophy of "innovation, dedication, service and win-win", Wuhan Zhongke Optics Valley Green Biotechnology Co., Ltd actively serves customers and the development of biological industry based on its customer-oriented, market-oriented, technology-supported, talent-based and institution- guaranteed principles.



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Sialic acid(SA)

N-acetylneuraminic acid



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CASOV Sialic acid

Maternal love, continuous tradition

N-acetylneuraminic acid is also known as “edible bird nest acid” or “sialic acid” (SA). It is a key component in Human Milk Oligosaccharides (HMO) contained in breast milk, and is a characteristic functional ingredient of the traditional high-end tonic edible bird's nest. Sialic acid can effectively promote the development and functional repair of nerve cells, epithelial cells and immune cells, which can get the effect of improving immunity, promoting intellectual development, nourishing skin and anti-aging. As a new functional nutrient, sialic acid is highly sought after by manufacturers of infant formula food, healthcare food, high nutritional food and cosmetics.

As the holding subsidiary of CABIO, Wuhan Zhongke Optics Vally Green Biotechnology Co., Ltd(CASOV) researches and produces the sialic acid through the fermentation technology of Chinese Academy of Science, which is a safe, high-quality novel food raw material. With its stable process and high purity, CABIO/ CASOV's sialic acid becomes a popular food material with promising application prospect and tremendous market value. CABIO/ CASOV's sialic acid will further promote the distribution of infant formula to be closer to the “Breast Milk Golden Standard”.

Purity of CASOV's sialic acid: ≥98% (HPLC)

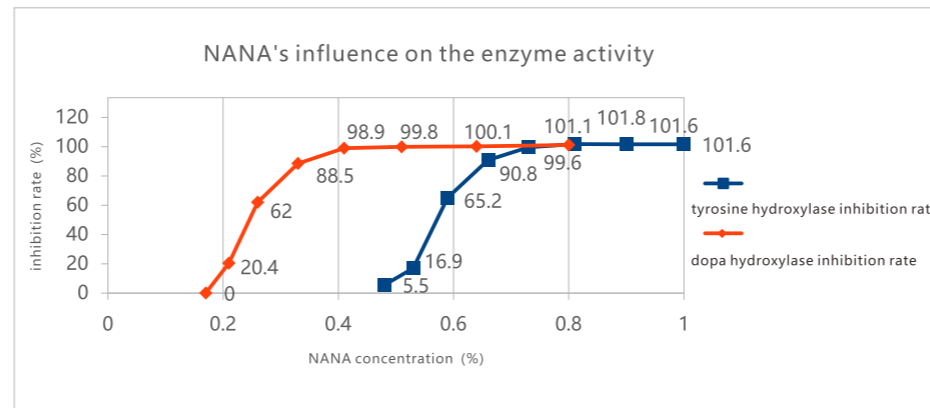
Sialic acid Functions

For food application:

1. Promotes brain development;
2. Delays brain dysfunction and promotes damaged nerve cells repair;
3. As a component of the cell membrane, sialic acid strengthens cells viability and enhances immunity.

For cosmetic application:

1. Anti-aging: Sialic acid is a natural MMP-1 inhibitor. By reducing the MMP-1 expression and activity, SA could enable senescent cells back to their normal state and maintain cell stability. It can also importantly reduce the rate of cell decline and extend the lifespan of skin cells to achieve the anti-aging effect.
2. Whitening: Sialic acid can effectively inhibit bioactive expression of tyrosine hydroxylase and dopa hydroxylase, thus preventing the generation of melanin. and dopa hydroxylase, thus preventing generation of melanin.



The chart above shows that dopamine hydroxylase activity can be effectively inhibited when the concentration of sialic acid reaches 0.5%. Also, dopamine hydroxylase and tyrosine hydroxylase activity show an effective inhibition when the concentration of sialic acid reaches 0.7%.

N-acetylneuraminic acid (98%)

General

N-acetylneuraminic acid from fermentation of Escherichia coli.

Ingredients

N-acetylneuraminic acid.

Physical Attributes

Appearance	Powder
Color	White
Smell	No off- smell

Physicochemical Analysis	Unit	Specification	Method
Assay	g/100g	≥98.0	HPLC
Specific rotation**	/	$[\alpha]_D^{20}(\text{H}_2\text{O}): -30.0 \sim -34.0$	GB/T 613
pH (2% solution)	/	1.8-2.3	GB/T5009.237
Elemental Analysis	Unit	Specification	Method
Heavy metals (Pb) **	mg/kg	≤9.5	GB/T5009.74
Hg**	mg/kg	≤0.05	GB/T5009.17
Pb**	mg/kg	<0.2	GB/T5009.12
As**	mg/kg	≤1.0	GB/T5009.11
Residues	Unit	Specification	Method
Moisture	g/100g	≤2.0	GB5009.3
Ash content**	g/100g	≤1.9	GB5009.4
Microbiological Requirements	Unit	Specification	Method
Total plate count	CFU/g	≤500	GB/T4789.2
Coliform	MPN/g	<0.3	GB/T4789.3
Mold**	CFU/g	<25	GB/T4789.15
Yeast**	CFU/g	<25	GB/T4789.15

*Product of China **Not tested for every lot

Storage

This product should be sealed in original packaging, stored in a cool and dry place. Shelf life is 24 months in the original sealed packaging.