

Technical Data Sheet

Product Name: Adenosine 5'-Monophosphate, Disodium Salt **Product Code:** EZ261014a

1.Technical Data Sheet		
Chemical Name	Adenosine 5'-Monophosphate, Disodium Salt	
CAS Number	4578-31-8	
Molecular Formula	C ₁₀ H ₁₂ N ₅ Na ₂ O ₇ P	
Compliance (Food / Pharmacopoeia / FCC / Feed)	Manufacturer's in-house specification	
Brief Introduction: Adenosine 5'-Monophosphate, Disodium Salt (5'-AMP, 2Na) is a purine nucleotide manufactured by enzymatic processing and purification, as indicated in the supplied process flow chart. Intended food or nutrition uses are subject to applicable market authorization.		
Item	Standard	Results
Appearance	White to off-white crystalline powder; odorless	Conforms
Assay (on dry basis)	98.0% - 102.0%	99.7%
Moisture	≤26.0%	21.1%
pH	7.5 - 8.5	8.1
Absorbance ratio A250/A260	0.72 - 0.86	0.78
Absorbance ratio A280/A260	0.08 - 0.22	0.14
Heavy Metals		
Heavy metals (as Pb)	≤10.0 mg/kg	<10.0 mg/kg
Lead (Pb)	≤2.0 mg/kg	<0.02 mg/kg
Arsenic (As)	≤2.0 mg/kg	<0.03 mg/kg
Microorganism		
Aerobic bacterial count	≤1,000 CFU/g	<10 CFU/g
Coliforms	<10 CFU/g	<10 CFU/g
Staphylococcus aureus / Salmonella	Negative/25 g (each)	Not detected / Not detected
Storage & Shelf Life		
Package	25 kg drums	
Shelf Life	36 months in unopened original packaging under recommended storage conditions.	
Storage	Store in a cool and dry place in unopened original packaging; keep tightly closed.	

2. Origin & Ingredient

Country of origin of the product: China		Origin statement: available ☒	
This product is a pure material ☒		This product is a compound material ☐	
Animal origin	☐ bovine	Specific Source: /	
	☐ porcine	Specific Source: /	
	☐ ovine	Specific Source: /	
	☐ others:	Specific Source: /	
Synthetic	☒	Starting material: RNA	Origin: China
Biotechnological processing	☐ Catalysis By Enzymes	Name of Enzyme: / Sources of Enzymes: /	
	☐ Fermentation	Source of Medium: / Strain: /	
Botanical Origin	Botanical Name:	/	
	Part:	/	
	Wild or Cultivated:	/	
	Country of Origin:	/	
	Solvent Used:	/	

3. Nutrition Data	
Nutritional Composition	☒ Per 100g ☐ Per Serving
☐ Energy (kJ) ☐ Energy (kcal)	0kal
Fat (g)	0
Carbohydrates (g)	0
Protein (g)	0
Sodium (mg)	0

4. Non-GMO Declaration	YES	NO
The product does not contain or consist of GMO	☒	☐
The product is not produced from GMO or does not contain ingredients produced from GMO (irrespective of whether there is DNA or protein of GM origin in the final product)	☒	☐
This product is not produced by means of GM microorganism including precursor substances, e.g., with GMOs or Genetically Modified microorganisms processing aids (bacteria, yeast,).	☒	☐
This product is not produced with the help of enzymes, which were obtained from GMOs	☒	☐
Does the product contain any ingredients from animal? If yes, are genetically modified crops contained in the feed for the animal?	☐	☒

We confirm that this product complies with Regulations (EC) No 1829/2003 and 1830/2003, as amended, and that a Non-GMO statement is available.	☒	☐
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5. Allergen Declaration

We have carefully reviewed this product according to Regulation (EU) No 1169/2011, as amended, and confirm the following:

	Direct incorporation as a base raw material or in a derivative form (don't forget the carriers, the additives, and the processing aids)		CROSS CONTAMINATION					
	Yes (Precise nature)	No	Presence on the production line		Presence on the production workshop		Presence on the production factory	
			Yes (precise the nature)	No	Yes (precise the nature)	No	Yes (precise the nature)	No
Cereals containing gluten (1) and products thereof		N		N		N		N
Crustaceans and products thereof		N		N		N		N
Eggs and products thereof		N		N		N		N
Fish and products thereof (2)		N		N		N		N
Peanuts and products thereof		N		N		N		N
Soybeans and products thereof (3)		N		N		N		N
Milk and products thereof (including lactose) (4)		N		N		N		N
Nuts (5) or products thereof		N		N		N		N
Celery and products thereof		N		N		N		N
Mustard and products thereof		N		N		N		N
Sesame seeds and product thereof		N		N		N		N

Sulphur dioxide and sulphites at concentrations of more than 10mg/kg or 10 mg/l expressed as SO ₂		N		N		N		N
Lupines and products thereof		N		N		N		N
Mollusc and product thereof		N		N		N		N
1. Cereals which contain gluten (i.e. wheat, rye, barley, oats, spelt, kamut or their hybridised strains) except: wheat-based glucose syrups including dextrose, wheat-based maltodextrins, glucose syrups based on barley, cereals used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages; 2. Except: fish gelatine used as carrier for vitamin or carotenoid preparations, fish gelatine or Isinglass used as fining agent in beer and wine. 3. Except fully refined soybean oil and fat, natural mixed tocopherols (E306), natural D-alpha tocopherol, natural D-alpha tocopherol acetate, natural D-alpha tocopherol succinate from soybean sources; vegetable oils derived phytosterols and phytosterol esters from soybean sources; plant stanol ester produced from vegetable oil sterols from soybean sources. 4. Except when used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages, lactitol. 5. Almond (<i>Amygdalus communis</i> L.) hazelnuts (<i>Corylus avellana</i>), walnut (<i>Juglans regia</i>), cashew (<i>Anacardium occidentale</i>), pecan nuts (<i>Carya illinoensis</i>), Brazil nut (<i>Bertholletia excelsa</i>), pistachio nut (<i>Pistacia vera</i>), macadamia nut and Queensland nut (<i>Macadamia terniflora</i>) and products thereof, except nuts used for making distillates or ethyl alcohol of agricultural origin for spirit drinks and other alcoholic beverages;								

6. Non-Irradiation (According to Directive 1999/2/EC and Directive 1999/3/EC, as amended)		
This product has not been treated with ionising radiation	☒ YES	☐ NO
None of the raw materials we used for this product have been treated with ionising radiation.	☒ YES	☐ NO
We confirm above non-Irradiation statement is available	☒ YES	

7. Nanomaterial (According to Regulation (EU) 2015/2283, Article 3(2)(f), where applicable)		
This product does not contain any nanomaterials as defined in EU food legislation	☒ YES	☐ NO
This product has not been made with nanotechnology	☒ YES	☐ NO
We confirm above non-Nanomaterial statement is available	☒ YES	

8. Residual Solvents (According to ICH Q3C(R9) and USP <467>; Directive 2009/32/EC, as amended, where applicable)	
For this product, solvents used during the production process:	☒ solvent used ☐ solvent not used
We confirm residual solvents in this product comply with:	☒ ICH Q3C(R9) ☒ USP <467> ☒ Directive 2009/32/EC ☐ N/A
Residual solvent statement available	☒

9. Pesticide Residual (Regulation (EC) No 396/2005, as amended, where applicable)	
This product is of vegetable origin	☐ YES ☐ NO ☒ N/A
We confirm pesticide residual of this product complies with:	☐ EC 396/2005 ☒ EP ☒ USP <561> ☐ N/A
Pesticide residual statement available	☒ YES

10. BSE/TSE Information (According to Regulation (EC) No 999/2001, as amended, and Ph. Eur. General Chapter 5.2.8, where applicable)	
Cattle, sheep, goats, and other animals naturally susceptible to infection with transmissible spongiform encephalopathy (TSE) agents, or those susceptible to infection through the oral route (excluding humans and non-human primates), are defined as "BSE-relevant animal species." Pigs and birds, however, are not naturally susceptible to infection via the oral route and, therefore, are not considered TSE-relevant species. Similarly, dogs, rabbits, and fish are also not classified as TSE-relevant animal species.	
The product contains no ingredients of ruminant origin and no materials derived from or exposed to ruminants affected by or under quarantine for Transmitting Transmissible Spongiform Encephalopathy (TSE) / Bovine Spongiform Encephalopathy (BSE).	☒ YES ☐ NO ☐ NA
In the manufacturing of this product, there is not any raw or source material and /or reagent used that is of animal origin i.e., bovine, serum-albumin, enzymes, culture broths including those used to prepare working or master cell tanks.	☒ YES ☐ NO ☐ NA
Equipment/systems/tools use for processing or storage of the material do not come into contact at any time with materials of animal origin (e.g., components of media filler used to check such system).	☒ YES ☐ NO ☐ NA

The material is not purified by using solvents, chromatographic media or buffers that contain components of animal origin.	☒ YES ☐ NO ☐ NA
We confirm this product complies with:	☒ Regulation (EC) No 999/2001 ☒ Ph. Eur. General Chapter 5.2.8
We confirm BSE/TSE statement is available	☒ YES

11. Contaminants Information

(General EU framework: Regulation (EU) 2023/915, as amended, where applicable)

Aflatoxins / Ochratoxin A - applicability and compliance under Regulation (EU) 2023/915	☒ YES ☐ NO ☐ NA
Melamine - applicability / compliance	☒ YES ☐ NO ☐ NA
Dioxins, Furans and PCBs - applicability / compliance	☒ YES ☐ NO ☐ NA
Polycyclic aromatic hydrocarbons (PAHs) - applicability and compliance under Regulation (EU) 2023/915	☒ YES ☐ NO ☐ NA
Contaminant compliance statement under Regulation (EU) 2023/915 is available	☒ YES ☐ NO

12. WADA Statement

The supplied manufacturing flow chart shows no addition of WADA-listed substances. This statement does not constitute WADA certification or batch-specific testing.

13. ETO Free Statement

Ethylene oxide (EtO), 2-chloroethanol (2-CE), and other chemical sterilizing agents are not used during the manufacturing, storage, or transportation of this product.

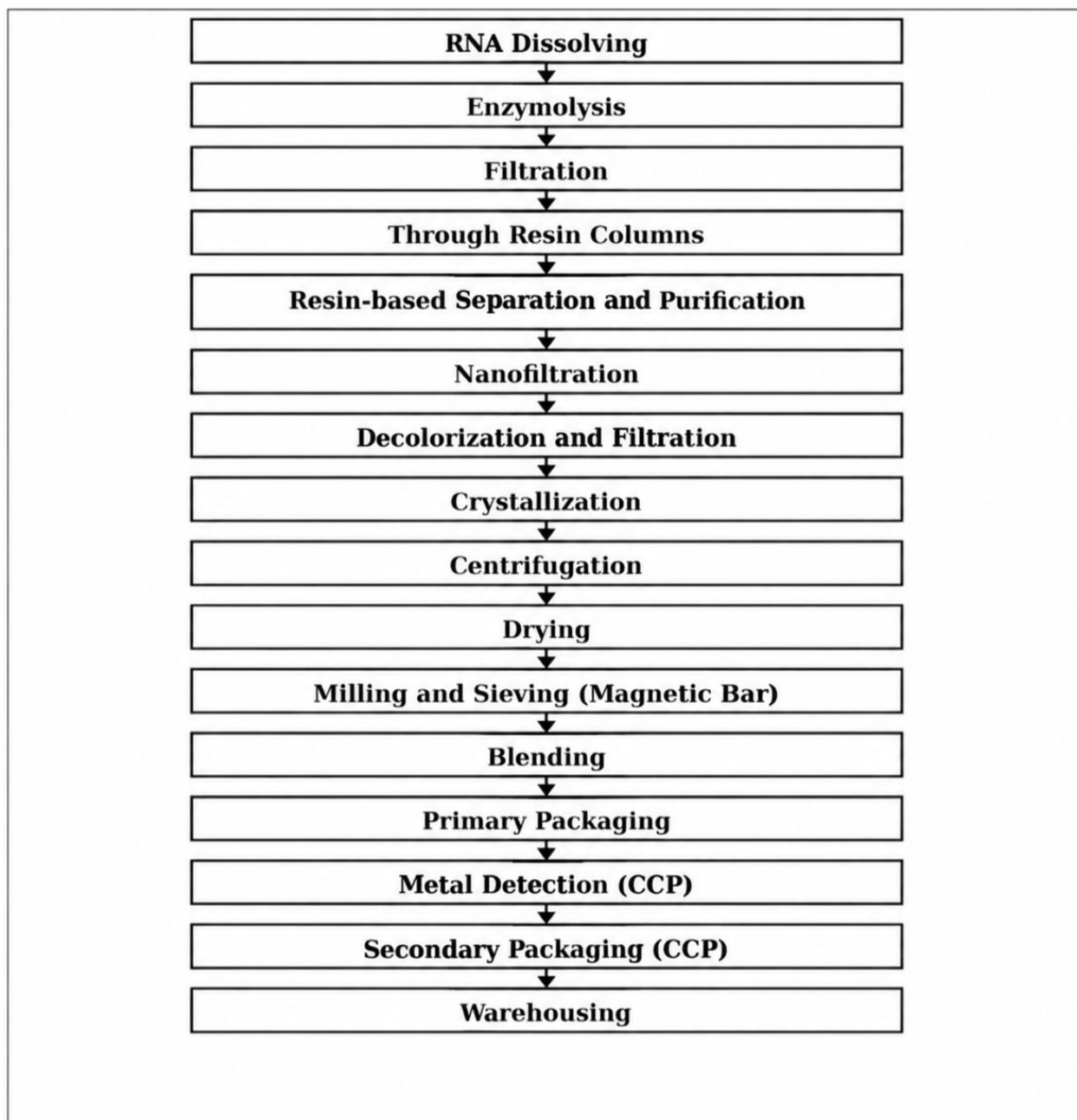
14. Other Statements

Nitrates - applicability / compliance under Regulation (EU) 2023/915, as amended, where applicable	☐ YES ☐ NO ☐ NA
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Mycotoxins / Aflatoxins - applicability / compliance under Regulation (EU) 2023/915, as amended, where applicable	☒ YES ☐ NO ☐ NA
3-MCPD - applicability / compliance under Regulation (EU) 2023/915, as amended, where applicable	☒ YES ☐ NO ☐ NA
Pyrrolizidine alkaloids - applicability / compliance under Regulation (EU) 2023/915, as amended, where applicable	☒ YES ☐ NO ☐ NA
We confirm that the applicable contaminant statement is available	☒ YES ☐ NO ☐ NA

Flow Chart

Adenosine 5'-Monophosphate, Disodium Salt





Safety Data Sheet

Product Name: Adenosine 5'-Monophosphate, Disodium Salt

CAS Number: 4578-31-8

Synonyms: 5'-AMP disodium salt; 5'-AMP, 2Na

Recommended Use: Nucleotide raw material; intended food/nutrition application and market authorization to be confirmed.

1. Identification

Manufacturer / Supplier: .Enzymolab

Address: Chengnan Road, Huaxi Subdistrict, Changxing County, Huzhou City, Zhejiang Province, 313100, China

Intended Use: Nucleotide raw material; use in food/nutrition products only where permitted by applicable regulations.

2. Hazard Identification

HMIS Rating: Health 0; Flammability 0; Reactivity 0

NFPA Rating: Health 0; Flammability 0; Reactivity 0

Potential Health Effects:

Inhalation: Material may irritate mucous membranes and the upper respiratory tract; may be harmful if inhaled.

Skin Contact: May cause skin irritation; may be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Ingestion: May be harmful if swallowed.

3. Composition / Information on Ingredients

Adenosine 5'-Monophosphate, Disodium Salt (CAS 4578-31-8); assay 98.0–102.0% on dry basis per manufacturer specification. Water/moisture is up to 26.0%; other impurities are not separately specified in the supplied documents. Hazard classification and exact composition to be confirmed by the supplier.

Component	Concentration
Adenosine 5'-Monophosphate, Disodium Salt	Assay $\geq$ 98.0% (dry basis)

4. First-Aid Measures

Inhalation: Remove to fresh air. If breathing becomes difficult, call a physician.

Skin Contact: Wash immediately with soap and copious amounts of water.

Eye Contact: Flush with copious amounts of water for at least 15 minutes; seek medical advice if needed.

Ingestion: Rinse mouth with water if conscious; call a physician.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Protective Equipment: Wear self-contained breathing apparatus and protective clothing.

Specific Hazards: May emit toxic fumes under fire conditions.

6. Accidental Release Measures

Personal Precautions: Minimize direct skin/eye contact and dust inhalation.

Cleaning: Sweep up, place in a suitable container for disposal, avoid raising dust, ventilate and wash spill area after pickup.

7. Handling and Storage

Handling: Avoid inhalation and contact with eyes, skin, and clothing.

Storage: Keep tightly closed. Store at room temperature in a cool, dry place.

8. Exposure Controls / Personal Protection

Engineering Controls: Safety shower and eye bath; mechanical exhaust where appropriate.

Personal Protective Equipment:

Respiratory: Use suitable dust protection where needed (e.g., N95/P1).

Hands: Protective gloves.

Eyes: Chemical safety goggles.

General Hygiene: Wash thoroughly after handling.

9. Physical and Chemical Properties

Appearance: white to off-white crystalline powder. Molecular formula: $C_{10}H_{12}N_5Na_2O_7P$. Molecular weight: 391.18 g/mol. pH: 7.5–8.5 (test conditions not stated). Solubility: soluble in water; one commercial reference lists 10 mg/mL, but the solubility of this food-grade lot has not been measured/reported. Melting/boiling point, density, vapor pressure, flash point and partition coefficient: not determined in supplied documents.

Property	Description
Appearance	White to off-white crystalline powder
Molecular Weight	391.18 g/mol
pH	7.5 - 8.5
Solubility	Soluble in water (qualitative); exact solubility of this grade not specified. Commercial reference: 10 mg/mL; verify with supplier.
Molecular Formula	$C_{10}H_{12}N_5Na_2O_7P$

CAS Number 4578-31-8

10. Stability and Reactivity

Stability: Stable under normal conditions.

Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, and phosphorus-containing fumes may form on thermal decomposition.

Hazardous Polymerization: Will not occur.

11. Toxicological Information

Skin/eye contact may cause irritation. Inhalation may irritate mucous membranes and the upper respiratory tract. Toxicological properties have not been thoroughly investigated in the supplied MSDS.

12. Ecological Information

No data available in the supplied MSDS.

13. Disposal Considerations

Dispose through a licensed waste disposal service in accordance with applicable federal, state, and local environmental regulations.

14. Transport Information

DOT: Non-hazardous for transport.

IATA: Non-hazardous for air transport.

15. Regulatory Information

United States: SARA listed - No.

Canada: Refer to the supplier MSDS for WHMIS / DSL / NDSL information.

16. Other Information

The safety information is based on the supplier MSDS and is intended as guidance for appropriate handling and safety precautions.