

Sodium Glycerophosphate BPC 49

Organic Phosphate Source — Pharmaceutical / Food / Research Grade | Catalogue No. ASC-8042

1. Product Overview

Sodium Glycerophosphate is a high-purity, fully water-soluble organic phosphate compound widely used in pharmaceutical formulation, food manufacturing, nutraceuticals, and biochemical research. It provides a bioavailable source of phosphate while contributing buffering capacity in biological and formulated systems. The compound is odourless with a mild salty taste, and complies with BPC 49 (British Pharmacopoeia Codex) specifications.

2. Chemical & Physical Information

Product Name	Sodium Glycerophosphate (BPC 49 Grade)
Catalogue Number	ASC-8042
CAS Number	1334-74-3
Chemical Formula	$C_3H_7Na_2O_6P \cdot xH_2O$
Molecular Weight	216.04 g/mol (anhydrous basis)
Composition	Mixture of variable proportions of sodium (2RS)-2,3-dihydroxypropyl phosphate and sodium 2-hydroxy-1-(hydroxymethyl)ethyl phosphate (racemic α/β mixture)
Grade	BPC 49 (British Pharmacopoeia Codex)
Form	White monoclinic plates, crystals, or crystalline powder
Odour / Taste	Odourless; salty taste
Solubility	Freely soluble in water (1 g in 4 mL)
Storage	Store in a cool, dry place; keep container tightly sealed; protect from moisture

Note: this BPC/pharmacopoeial-grade racemic mixture (CAS 1334-74-3, synonymous with CAS 55073-41-1) is a distinct product from single-isomer research-grade β -glycerophosphate (CAS 154804-51-0), which is not covered by this document.

3. Synonyms

Sodium glycerophosphate; Sodium glycerophosphate hydrate; Disodium glycerophosphate; Glycerophosphate disodium salt hydrate; Hydrated sodium glycerophosphate; Sodium glycerol phosphate; 1,2,3-Propanetriol, mono(dihydrogen phosphate), disodium salt.

4. Mode of Action

- Acts as a source of organic phosphate
- Contributes buffering capacity in biological and formulated systems
- Supports phosphate-dependent metabolic pathways
- Used clinically (as sodium glycerophosphate, brand name Glycophos) as an intravenous phosphate supplement

5. Applications

Category	Typical Use
Pharmaceutical formulation	Organic phosphate source in oral and parenteral formulations; buffering agent
Food & nutraceutical manufacturing	Food additive for pH stabilisation and phosphate fortification; dietary supplement raw material
Cell culture & biotechnology	Component of cell culture media as a phosphate source
Research & biochemistry	Studies of cellular respiration, glycolysis, and enzyme kinetics

6. Key Features

- Fully water soluble for easy preparation
- Complies with BPC 49 specification
- High chemical purity and batch-to-batch consistency
- Bioavailable organic phosphate source
- Neutral/mild taste and odourless

7. Typical Specifications (per BPC 49)

Parameter	Specification
Description	White monoclinic plates, crystals, or as a white powder, odourless and salty taste
Solubility	1 g in 4 mL of water
Alcohol soluble impurities (w/w)	Not more than 1.0%
Free alkali as Na_2CO_3	Not more than 1.0%
Free phosphates as P_2O_5	Not more than 0.5%
Arsenic	Not more than 0.0005%
Heavy metals (as lead)	Not more than 0.0020%
Assay (on anhydrous basis)	Between 98.0% and 102.0%

Exact analytical values for a given shipment are provided in the batch-specific Certificate of Analysis.

8. Storage & Stability

- Store in a cool, dry place
- Keep container tightly sealed
- Protect from moisture
- Typical shelf life 5 years from date of manufacture under recommended storage conditions

9. Intended Use & Safety

Supplied as a BPC 49 grade raw material suitable for pharmaceutical, food, supplement, and research use where permitted by local regulation. Refer to the Safety Data Sheet before use.

10. Quality & Supply Assurance

- Supplied with Certificate of Analysis (COA) with every batch
- Controlled manufacturing and packaging
- Consistent batch-to-batch quality
- Technical support available from AuSaMicS Life Science

11. Literature & References

1. British Pharmacopoeia Codex (BPC) 1949 — Sodium Glycerophosphate monograph.
2. Ph. Eur. monograph — Sodium Glycerophosphate, Hydrated ($C_3H_7Na_2O_6P \cdot xH_2O$).

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