

## Technical data sheet

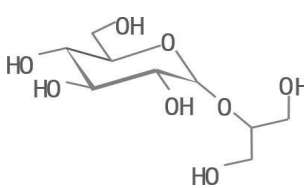
### Glycoin<sup>®</sup> natural

Product no.: 10005

Desert resurrection plant *Myrothamnus flabellifolia*, during dry season (left) and after rain (right). Glycoin<sup>®</sup> natural acts as a protection and re-activation substance in the extremophilic plant.

**Glycoin<sup>®</sup> natural** is a multifunctional and safe active ingredient exclusively manufactured by bitop.

**Glycoin<sup>®</sup> natural** is the only enantiopure and 100% natural Glyceryl Glucoside available in the market.

Trade name	<b>Glycoin<sup>®</sup> natural</b>
INCI name	Glyceryl Glucoside, Aqua (Water)
Chemical name	2-O- $\alpha$ -D-Glucopyranosylglycerine
CAS No.	22160-26-5
REACH No.	01-2120768115-54-0000
Description	Small molecule, sugar derivate, enantiopure substance
Structure	
Specification/ content	$\geq$ 50% Glyceryl Glucoside dissolved in water; see specification data sheet
Stability	pH 3-11; high temperatures ( $\leq$ 85°C); freeze-drying; light & oxygen stable
Solubility	Excellent solubility in water (1077 g/l)

# Glycoin<sup>®</sup> natural

## THE CELL ENERGIZER

Level of use	0.5-2%
Application media	Water phase (hot or cold)

Molecular formula	C <sub>9</sub> H <sub>18</sub> O <sub>8</sub>
Molecular weight	254.24 g/mol
Appearance	Transparent, mainly colorless liquid
Odor	Slightly characteristic odor
pH value (2% in water)	4.0 – 7.5
Density [g/ml]	1.2 – 1.4
Optical refraction [nd]	1.42 – 1.46
Optical refraction [Brix]	50 – 70
Kin. viscosity [mm <sup>2</sup> /s]	20 – 100

China compliant	Yes
EU regulations	No limitations according to the European Cosmetic Regulation (EC) No. 1223/2009. <b>Glycoin<sup>®</sup> natural</b> can be used for cosmetic formulations under the responsibility of the manufacturer.
USA regulations	Not specifically regulated by cosmetic regulations. <b>Glycoin<sup>®</sup> natural</b> can be used for cosmetic formulations under the responsibility of the manufacturer.
Japan regulations	Not specifically regulated by cosmetic regulations. <b>Glycoin<sup>®</sup> natural</b> can be used for cosmetic formulations under the responsibility of the manufacturer.
GMO-free	Yes
Non allergenic	Yes
Preservation	Preservative free
Production process	Patented biocatalytical process/ enzymatic reaction according to EN ISO 13485

Shelf life	3 years
Shipping / handling	No restrictions
Storage	At 5-25°C ; after opening: 2-8°C
Pack units	1kg, 5kg, 20kg

# Glycoin<sup>®</sup> natural

## THE CELL ENERGIZER

HS-Codes for exports	29389090
HS-Codes for imports	2938909090

## CERTIFICATES



COSMOS  
APPROVED



## APPLICATIONS

- Formulations for mature skin
- Skin care for sensitive and allergic skin
- Medical skin care / derma cosmetics
- After sun care
- Wound healing
- Color cosmetics
- Oral care
- Hair care

## FORMULATION GUIDELINES

- Level of use: 0.5-2%
- No incompatibility with other cosmetic active substances
- Can be added directly to hot or cold water phase prior to emulsification
- Stability: pH 3-11; ≤ 85°C; freeze-drying
- Excellent water solubility

## SAFETY DATA

**Glycoin<sup>®</sup> natural** has an excellent safety profile. Please see MSDS for further information.

## GENERAL INFORMATION

### Origin

**Glycoin<sup>®</sup> natural** is manufactured by a biocatalytical manufacturing process (enzymatic reaction) according to EN ISO 13485 at the bitop AG plant in Dortmund, Germany.

### Allergens

The product does not contain substances classified as allergenic according to European Directive 2000/13/EC (amended by 2003/89/EC) or 2003/15/EC Annex III (7th Amendment, Cosmetic Directive 76/768/EEC Fragrance Allergens. Furthermore, **Glycoin<sup>®</sup> natural** is free of feedstock allergens including wheat, oat, soy, shellfish, sesame, peanuts, tree nuts, milk and fish.

### Animal/Pork free

We hereby certify that all materials and facilities used for the production of **Glycoin<sup>®</sup> natural** are free from animal/pork or animal/pork derivatives.

### BSE/TSE

We do not use components derived from animal sources in the manufacture or formulation of this product.

### California Proposition 65

The product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

### CMR declaration

**Glycoin<sup>®</sup> natural** does not contain substances classified as carcinogenic, mutagenic or toxic for reproduction of category 1, 2 and 3, European Directive 2003/15/EC Annex I (7th Amendment, European Cosmetic Directive 2003/15/EC, CMR).

### Conflict Minerals

No conflict minerals are used in the production of Glycoin<sup>®</sup> natural and its raw materials.

## GENERAL INFORMATION

### Cyclosiloxanes D4, D5, D6

We hereby confirm that the substances octamethylcyclotetrasiloxane (CAS No. 555-67-2 (D4)), decamethylcyclopentasiloxane (CAS No. 541-05-6 (D5)) and dodecamethylcyclohexasiloxane, (CAS No. 540-97-6 (D6)) are not used in the manufacture of the product.

### EG/DEG

Because of the used raw materials and/or the manufacturing procedures the presence of ethylene glycol (EG; CAS 107-21-1) or diethylene glycol (DEG; CAS 111-46-6) can be excluded.

### Gluten

We hereby confirm that according to product composition and manufacturing process the presence of Gluten is not expected in the product.

### Glycol Ethers

We declare that the product does not contain any glycol ethers. During the manufacturing process no glycol ethers are used.

### HALAL customer information

Declaration on non-intentional use of Halal relevant substances. We herewith certify that the active ingredient **Glycoin<sup>®</sup> natural** is not manufactured by the use of alcohol (ethanol) or pork or any animal ingredient and does not contain in any way any animal fats or ingredients respectively impurities derived from any animal fats.

### Heavy metals and metal catalysts

The product is tested for heavy metals individually. See specification data sheet. Metal catalysts are not used for production of the above-mentioned product and are not expected to be present.

### Impurities

The product contains traces of glucose and fructose (please see specification) as technically unavoidable impurities due to the manufacturing process.

### Irradiation

We declare that **Glycoin<sup>®</sup> natural** is produced free from irradiation. In the production process no irradiation is used.

## GENERAL INFORMATION

### Kosher

The product does not contain or get in contact with any animal-based material.

### Latex

We hereby confirm that no materials containing latex or natural rubber are used in the manufacturing, handling and packaging process of our products.

### Microplastics

We hereby confirm that the product does not contain microplastic.

### No-animal testing

We declare that **Glycoin<sup>®</sup> natural** conforms to the requirements of EU cosmetics regulation 1223/2009 Reg. Art. 18 and EC 2003/15 Reg. Art 1 paragraph 2 (Art.4).

### Palm oil free

**Glycoin<sup>®</sup> natural** is 100% free of palm oil or its derivatives. Also, no palm oil or its derivatives is used during manufacturing process of **Glycoin<sup>®</sup> natural**.

### Pathogens

We hereby confirm the absence of pathogenic germs as follows (absent in 1 g):

- Yeast / Moulds
- *Pseudomonas aeruginosa*
- *E. coli* / Enterococcae
- *Candida albicans*
- *Staphylococcus aureus*
- *Aspergillus niger*

### Pesticide statement

The product does not contain any pesticides.

### Petrochemicals

We declare that the product is free of any petrochemical substances or their derivatives. No petrochemical substances or their derivatives are used during manufacturing process of **Glycoin<sup>®</sup> natural**.

## GENERAL INFORMATION

### Phthalates

The product does not contain phthalates.

### Residual Solvents

We declare that the product does not contain residual solvents according to CPMP/ICH/283/95.

### Substances of Very High Concern (SVHC)

We herewith inform that the above-mentioned product does not contain any substances listed in the current candidate list of Substances of Very High Concern published by the European Chemicals Agency (ECHA).

### Sulfates

We declare that according to the manufacturing procedures the presence of sulfates in the product can be excluded

### Vegan

We hereby confirm that the product is vegan, as it contains no animal ingredients or by-products. No animal ingredients or by-products are used during manufacturing process of **Glycoin<sup>®</sup> natural**.

### VOC & PAH

The product does not contain any volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs).

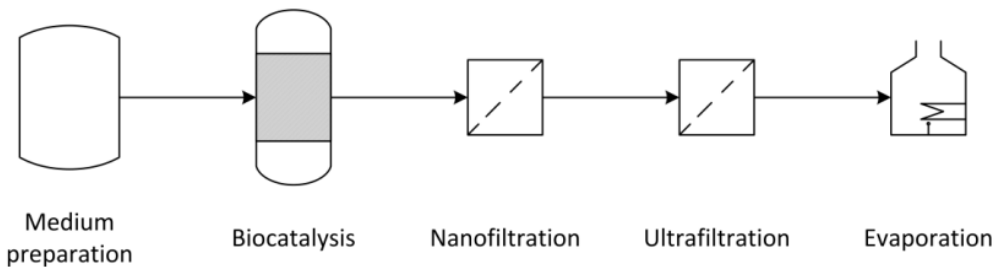
### Worldwide usage

The usage of **Glycoin<sup>®</sup> natural**, as a cosmetic active ingredient in cosmetic products complies with respective Cosmetic Directives or/and Regulations in the following countries and regions:

Europe, CIS, China, Thailand, Malaysia, Taiwan, Indonesia, Singapore, South Korea, Australia, Canada, Japan and USA

## GENERAL INFORMATION

### Manufacturing process



**Glycoin<sup>®</sup> natural** is exclusively manufactured at bitop AG in Dortmund, Germany using a patented biocatalytic process (enzymatic reaction).

**Glycoin<sup>®</sup> natural** is produced by an enzyme catalyzed reaction using a natural enzyme (sucrose phosphorylase) which originally exists in *Leuconostoc mesenteroides*, an organism which is used in food production processes (e.g., for German "Sauerkraut" and Koji).

All by-products are separated using nano- and ultrafiltration steps to obtain a pure and active enzyme as catalyst. Glycerin and sucrose are used as substrates. The purification includes the separation of **Glycoin<sup>®</sup> natural** and substrates (glycerin & sucrose) using standard chromatography steps.

# Glycoin<sup>®</sup> natural

THE CELL ENERGIZER

## GENERAL INFORMATION



## CONTACT

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