

## PhytoSpherix™

**PhytoSpherix™** is a completely natural form of glycogen, sourced and produced from plants by a patent pending new green process in Canada. It is dermatologist tested, non-irritating and hypoallergenic.

|                   |   |
|-------------------|---|
| INCI Name         | Glycogen  |
| CAS               | 9005-79-2   |
| Chemical Name     | Homopolymer of $\alpha$ -D-Glucopyranose                      |
| Synonyms          | Glycogen  |
| Molecular Formula | (C <sub>6</sub> H <sub>10</sub> O <sub>5</sub> ) <sub>n</sub> |
| Molecular Weight  | About 15 million Da   |



### TYPICAL PROPERTIES\*

|  |  |
|--|--|
| <b>Description</b>                       | White to almost white powder           |
| <b>Appearance (1 % aqueous solution)</b> | Opalescent solution                    |
| <b>Phytoglycogen (% , dry basis)</b>     | ≥ 98%                                  |
| <b>pH (1 % aqueous solution)</b>         | 5.00 – 7.00                            |
| <b>Loss on drying (105°C, 5 h)</b>       | ≤ 7.0 %                                |
| <b>Residue on ignition</b>               | ≤0.5%                                  |
| <b>Microbial purity</b>                  | Total aerobic plate count: ≤100 CFU /g |
|  | Total yeast and molds: ≤100 CFU /g     |

(\* ) Although this information is typical of PhytoSpherix™, it should not be considered as a specification.

### SHELF LIFE AND STORAGE

|                   |  |
|-------------------|--|
| <b>Shelf Life</b> | 2 years from date of manufacture                       |
| <b>Packaging</b>  | 1 kg and 10 kg HDPE containers                         |
| <b>Storage</b>    | Store in a clean, dry location at ambient temperature. |

**Applications:** PhytoSpherix™ can be used in a wide range of cosmetics and personal care applications to provide anti-aging benefits, enhance moisture retention and skin feel, improve the photostability and/or thermostability of active ingredients, and the stability of emulsions.

Potential applications include:

- Moisturizing Creams, Lotions, Gels, Sprays, and Masks
- Nourishing Serums for Dry Skin
- Acne Treatment Films, Gels, and Clay Masks
- Sun Care Products
- Hair Treatments and Serums

**Formulating with PhytoSpherix™:**

Typical usage level ranges from 0.05-1% depending on the application and desired effect.

**Moisturizing Creams:** 0.1-0.2% when used alone, or 0.05-0.1% when used in combination with other actives (i.e. hyaluronic acid)

**Anti-Aging Treatments:** 0.3-1%

PhytoSpherix™ is readily soluble in water. Add to the aqueous phase with moderate mixing before emulsification, or to the final phase after emulsification.

PhytoSpherix™:

- Forms clear solutions at low concentrations, and opalescent solutions at high concentrations
- Is non-ionic and demonstrates excellent compatibility with other cosmetic ingredients
- Is stable from pH 3-10, and in temperatures up to 180° C

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