

Ethically Sourced Ingredients

RADISH ROOT FERMENT, WATER SOLUBLE PRESERVATIVE

Suitable for beauty and personal care applications.

INCI: Leuconostoc/Radish Root Ferment Filtrate

Extraction: See Background Section

Shelf Life: 1 Year

Origin: USA

Background:

As the media continues to focus its attention on the risks of synthesized preservatives, product formulators and manufacturers are facing increased challenges with procuring natural alternatives. Praan Naturals Radish Root Ferment is a naturally derived fermented product that is well suited for beauty, cosmetic and personal care formulation and offers impressive antimicrobial and moisturization properties. Radish Root Ferment is produced by the careful, controlled fermentation of daikon radishes (*Raphanus sativus*) using *Leuconostoc kimchii*, a lactic acid bacteria. *Leuconostoc kimchii* is best known for its role in the creation of the delicious, spicy Korean fermented cabbage dish known as kimchi. Willow Bark Extract is then added to initiate cell lysis. Once completed, the Radish Root Ferment is then filtered to remove undesirable material and bacteria.

Ethical and Sustainable Sourcing:

The IUCN Red List of Threatened Species (International Union for Conservation of Nature and Natural Resources) has not evaluated the Daikon Radish (*Raphanus sativus*), most likely because this radish species is so abundant. Praan Naturals Radish Root Ferment is a conscientious, eco-friendly and sustainable alternative to synthetic preservatives and to preservatives that are derived from plant species that are classified as threatened or endangered.

Properties:

- Product Form: Liquid
- Solubility: Water
- Color: Yellow to Light Amber
- Appearance: Clear to Slightly Hazy
- Odor: Characteristic
- pH: 4.0-6.0
- Active For Acidic (pH 3) and Basic (pH 8) Conditions
- Heat Stable Up to 158 Degrees F (70 Degrees C)
- Antimicrobial
- Improves Moisturization Levels
- Contains Salicylic Acid
- See Spec Sheet and Test Results for Additional Details



Uses:

Radish Root Ferment reduces the growth of microorganisms, particularly bacteria and fungi. It is well suited for use within the formulation for your product's preservative system. In addition to its application as a natural antimicrobial, Radish Root Ferment also simultaneously helps to enhance the moisturization level of your skin care, hair care and cosmetic formulations.

Radish Root Ferment is water soluble and can be added to water based formulations or can be added during the water phase of emulsions that maintain a pH range of 3-8. It is recommended that Radish Root Ferment be added during the cooling phase at temperatures below 158 degrees F (70 degrees C) and added prior to the addition of thickeners such as xanthan gum. Radish Root Ferment has the potential for incompatibilities with highly anionic ingredients including thickeners. Please contact us for details.

Recommended Usage Rate: 2 - 4%

All formulations should be challenge tested by a qualified laboratory to ensure that each batch is properly preserved. The method of production, the specific components of the formulation, the environment in which the batch is formulated and the method of packaging all play a crucial role in the resulting shelf life of a batch. Therefore, we cannot guarantee your results when incorporating natural antimicrobials and preservatives into your formulations. Only lab challenge testing can determine how and if an antimicrobial/preservative is achieving the desired results.

Standard Packaging: Available in carboys.

Storage Information:

Mix well before use. Store at room temperature in a cool, dry location. Do not freeze.

For more information regarding Praan Naturals Radish Root Ferment and our range of preservatives and other natural ingredients, visit PRAANnaturals.com or call our Customer Care department at (800) 340-0080 or (203) 702-2500.

