

# Yeast Extract Research Paper

## APPEARS INS



Saccharomyces (Yeast) Ferment Filtrate is an ingredient found in Three Ships products, such as the Purify and Refresh cleansers.

It is produced by fermenting and filtering yeast and is abundant in minerals, vitamins, and amino acids that work to immediately increase skin moisture. The yeast filtrate is a complex ingredient that works in different ways to benefit the skin, improving skin moisture, elasticity, and conditioning the skin.

## ENSURING HEALTHY SKIN BARRIER IS ALSO IMPORTANT IN MAINTAINING THE SKIN'S MOISTURE LEVEL

The Saccharomyces (Yeast) Ferment Filtrate starts off as a yeast. Yeasts are microorganisms and there are many different strains of yeast, some of which are used in industries such as winemaking and beer brewing to produce alcohol through the process of fermentation. Other types of yeast are also used in baking as a leavening agent.

\* Ensuring a healthy skin barrier is also important in maintaining the skin's moisture levels, as the skin barrier acts to protect the skin, as well as lock moisture in.

### Saccharomyces (Yeast) Ferment Filtrate

is filtered yeast that has gone through the fermentation process. It benefits the skin by working in various ways to provide moisture.

### Beta- glucans

are humectants which are present in the yeast filtrate. They draw in moisture from their surroundings, hydrating the skin.

Another important skin component that the yeast extract acts upon are fibroblasts, which are cells that work to produce collagen and promote wound healing.



Traditionally, Saccharomyces (Yeast) Ferment Filtrate is made when pure yeast cultures are added to a solvent within a fermentation vessel. The vessel is set up to provide optimal conditions for fermentation, which allows the yeast to multiply and increase in concentration within the vessel over time. The fermentation process also increases the vitamins, amino acids, and minerals present. The yeast is then moved through a series of additional fermentation vessels that allow it to grow further. Once the yeast is done fermenting, the solution is put through a filter press to further concentrate the yeast and yield the final product. However, the exact process of extraction method for the Saccharomyces (Yeast) Ferment Filtrate that Three Ships sources is proprietary information.

## YEAST IS RICH IN MINERALS, VITAMINS & AMINO ACIDS

Saccharomyces (Yeast) Ferment Filtrate is rich in minerals, vitamins, and amino acids that all benefit the skin. Minerals are used in skincare to increase the skin's moisture level. The fermented yeast is found to contain potassium, phosphorus, magnesium, and calcium. Vitamins and amino acids both work in different ways to benefit skin health, which vary based on which vitamins or amino acids are present.

### SCIENTIFIC STUDY

#### Studies on Beta-glucan

Beta-glucan is naturally found in yeast and acts as a moisturizing agent. In literature, beta-glucan extracted from molasses yeast was incorporated into a gel and found to increase hydration for 22 human participants by 9% over 14 days, compared to 5% over 14 days with a placebo gel.

In addition, another study also reported a ~15% increase in hydration by beta-glucan from yeast over 120 min compared to a ~11% decrease in hydration using distilled water over the same time period. These trials, in addition to many others, confirm that beta-glucan provides a moisturizing effect. It is also known that beta-glucan is a humectant, meaning it draws in water from its surroundings to produce the hydrating effect.

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#### Studies on Yeast from a Skincare Perspective

One study used Saccharomyces (Yeast) extract in order to evaluate its properties over a 30 day trial using human participants. Over the trial, it was found that formulas containing the yeast extract improved skin roughness with lasting results, whereas control formulas without the extract did not maintain the improvement over time. The control measurements showed skin roughness improvements at 3h after application, but this reverted over time at the 15 and 30 day marks, while the yeast extract containing formula measured reduced skin roughness at 3h, which was then maintained over the 15 and 30 day periods. In addition, the subjective opinions gathered from the participants also showed the yeast extract containing formula to better improve skin moisture, smoothness, texture, and brightness in comparison to the placebo/control.

Multiple studies conducted also included tests on potential skin irritation obtained from Saccharomyces (Yeast) Ferment Filtrate and/or its components and no evidence of skin irritation or allergies were found in the studies observed.

Saccharomyces (Yeast) Ferment Filtrate is a complex ingredient containing many different compounds within itself. These different components lead to improved skin moisturization through ways such as humectant action, as well as skin barrier maintenance. This yeast filtrate can be found in Three Ships products such as the Purify and Refresh cleansers