

GlucoMoist

Complex polysaccharide derived
from Torula yeast improves
moisture and skin texture

Product Introduction

**World's first functional moisturizer derived from Torula yeast cell walls
utilizing complex polysaccharides**

Leaves skin feeling smooth with deep moisturizing effect

Natural, Sustainable, UPCYCLE

Gluca Moist

"Gluka Moist" is the world's first cosmetic ingredient that is 100% naturally derived from Torula yeast, which Mitsubishi Corporation Life Science has been researching for many years. By-products discarded in the manufacturing process of food ingredients utilizing Torula yeast are upcycled using proprietary technology.

"Gluka Moist," consisting of about 40% β -glucan and polysaccharides, is extracted and manufactured. It has both hydrophobic and hydrophilic properties, and is easily absorbed by the skin, hydrating and maintaining moisture in the stratum corneum. These are the effects of the complex polysaccharides unique to Torula yeast, which have been shown in clinical trials to have an excellent skin feel improvement.

Moisture can be adjusted to achieve a desired skin feel, from refreshing to deep moisturizing, by adjusting formula use levels.



Product Information

INCI	Yeast Polysaccharides
Characteristics	Powder
Shelf Life / Storage Conditions	18 months if stored at 25°C
Packaging	1 kg
Recommended dosage	1 %
NMPA	Approved
Benefits	Improve skin texture, Moisturizing, Brithening, Skin cell activation, Gives firming feel
Formulation Advices	- It does not thicken as much as the other polysaccharides. - Viscosity may change when combined with carbomer and other polysaccharides. - When dispersed in polyol, and then added to water, a water dispersion can be made more easily. - Depending on the formulation, Gluca Moist may precipitate. - Please refer to the formulation guidelines for details.

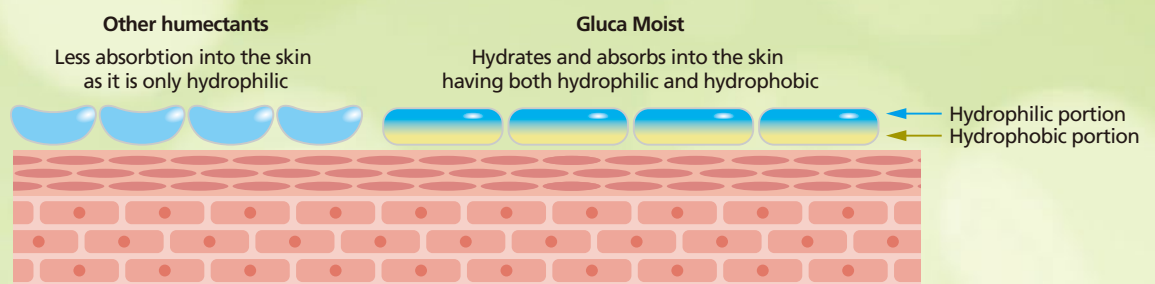
Safety Information

Mutagenicity (Ames test)(Max 5000µg/plate)	No mutagenicity
<i>in vitro</i> Skin irritation (Undiluted)	No irritation
<i>in vitro</i> Eye irritation (20% solution)	No irritation
Human patch test (Subjects 20: M10, F10, 20% solution)	Negative
Cumulative irritation and sensitization test (RIPT) (20% solution)	Negative

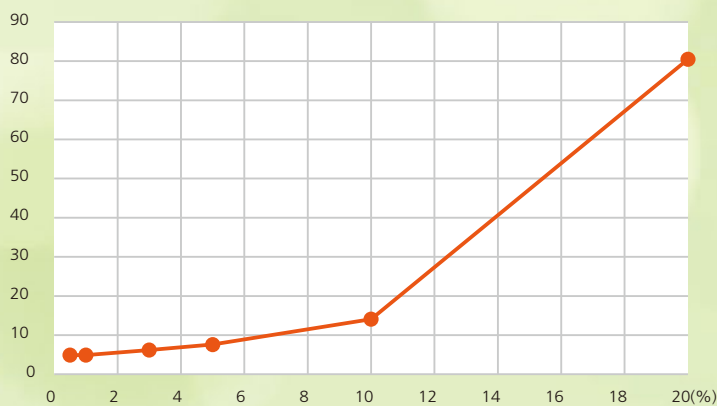
(*)RIPT : Repeated Insult Patch Test

Material Properties

Physical Properties



Viscosity(cp)



Other Polysaccharides

1% Gluca Moist solution

Gluca Moist absorbs into the skin as it does not thicken as much as the other polysaccharides.



Other Polysaccharides

1% Gluca Moist solution

Gluca Moist has a mild emulsification

Upcycling For Sustainability

Manufacturing Process and Upcycling

We are dedicated to product development, taking responsibility for:

- Safe products with high functionality utilizing cutting-edge technology
- Naturally derived products from bio-technology such as fermentation
- Sustainable manufacturing through upcycling etc.

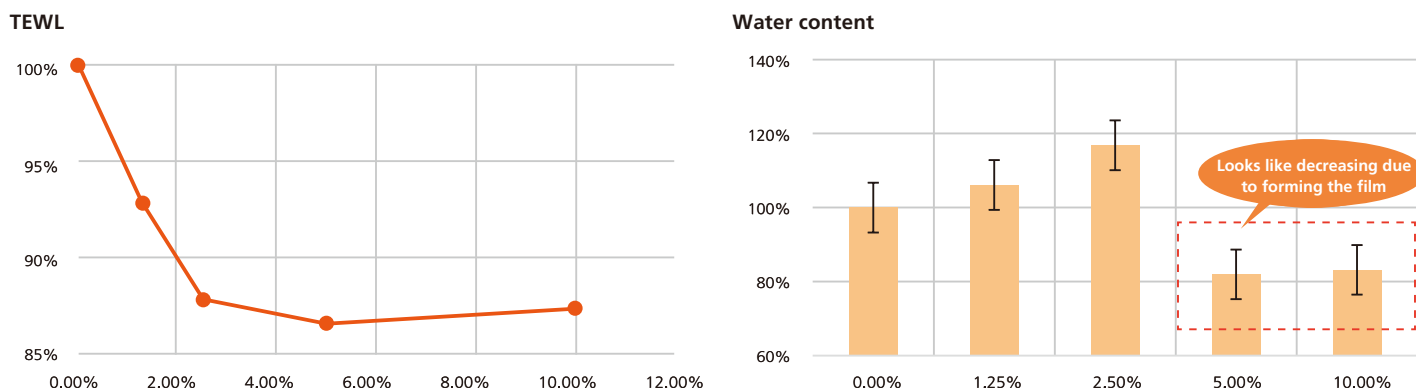
Gluca Moist is made from yeast residue following the removal of yeast extract from the cell wall.

Extracting the polysaccharides (principal component is b-glucan) from the yeast cell wall following the removal of Umami seasoning allows us to offer this product as a cosmetic ingredient.



Clinical study 1 Moisturizing (Concentration dependent)

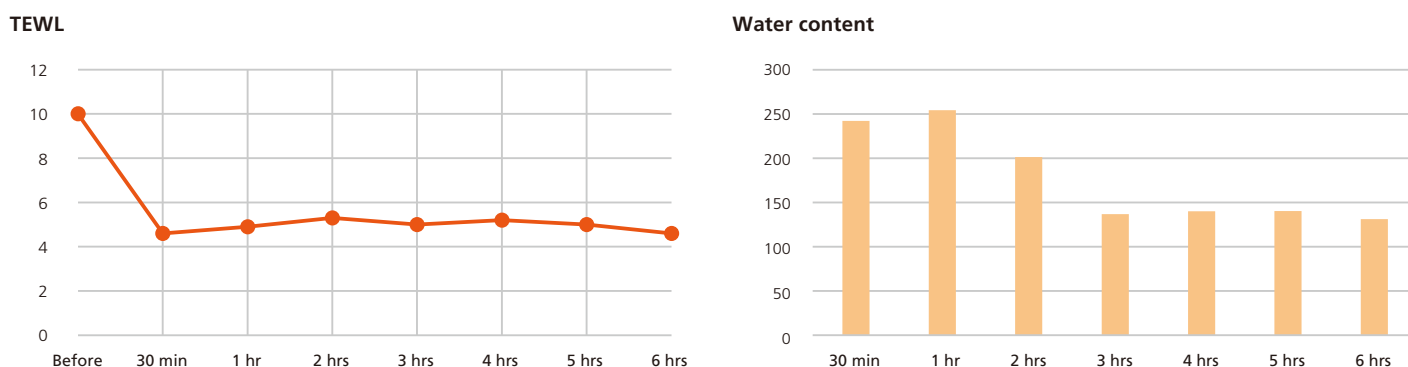
Test item	Gluca Momist solution
Application method	20 µL applied to a 1.5 cm square area on the arm
Evaluation method	Trans Epidermal Water Loss (TEWL) and Water content
Procedure	Cleanse → Standby (at least 15 minutes) → Apply → Dry → Leave for 10 min → Measurement



TEWL decreased and water content increased in concentration dependence.

Clinical study 2 Moisturizing (long-lasting)

The number of the subjects	10 subjects/ Ave age: 48.6± 6
Test item	1.5 % Gluca Moist gel
Application method	20 µL applied to a 2 cm square area on the arm
Evaluation method	Trans Epidermal Water Loss (TEWL) and Water content
Procedure	Cleanse→ Measurement (before application) → Apply → Measurement (after 30 minutes, every hour thereafter up to 6 hours)



Even after 6 hours, TEWL decreased and water content increased.

Reveiws



What do you think of the cosmetic containing Gluca Moist?

Much firmness!

Improved of the coarse uneven skin.

Dewy and brighten up the skin!

Much hydration!



What did you feel after using make-up base containing Gluca Moist?

Moisturizing when put it but after a while, it made smoother skin!

Make-up last even in the evening!

Absorbed into the skin very well with moisturizing but still smooth.

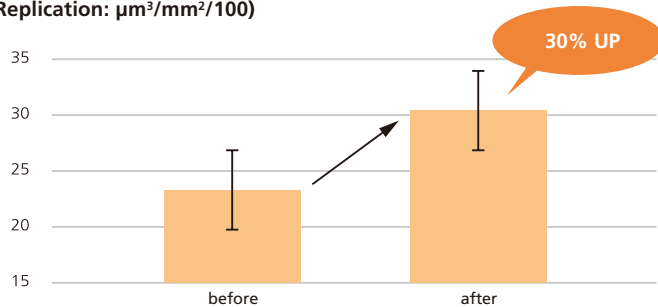
Smooth but it gave much hydration.

Clinical Studies

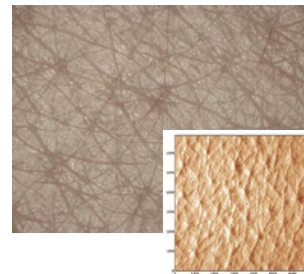
Clinical study 3 Improve Skin Texture

Test design	Open label
The number of the subjects	20 subjects/ Ave age: 43.65
Test item	1.5 % Gluca Moist lotion
Application method	Apply 0.8 g test item to face twice daily (morning and evening) for 28 days
Evaluation method	Skin texture analysis, water content and the amount of melanin

Skin texture volume ratio
(Replication: $\mu\text{m}^3/\text{mm}^2/100$)



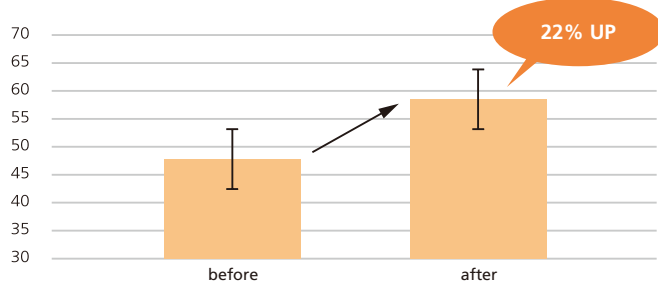
49 yrs old woman
before



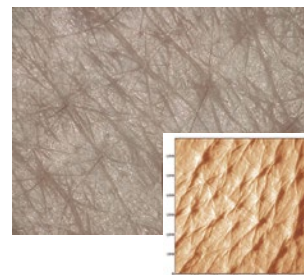
4 weeks



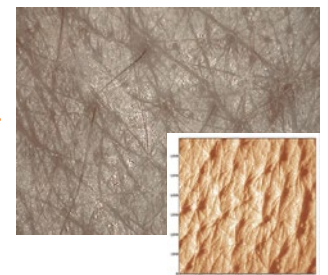
Skin moisture content



58 yrs old woman
before



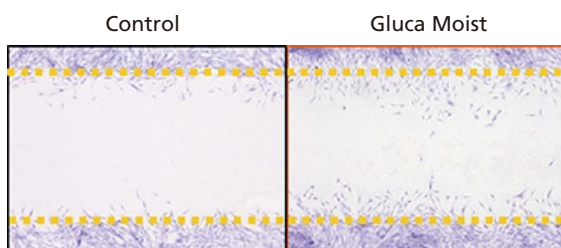
4 weeks



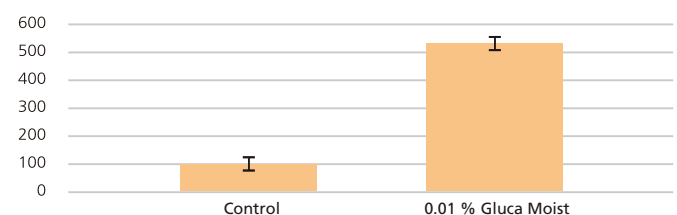
The effect of the complex polysaccharide unique to Torula yeast improved the skin texture.

Cell activation

Scratch assay (cell migration effect to the wound spot) was performed using fibroblast NB1RGB.



Total somatic cell number (% of control)



Possibility of rough skin improvement due to the cell migration effect

Beauty,
wellness and heartfulness
from Hakko technology

Fervere

"Fervere" is a series of completely new fermentation cosmetic raw materials developed by Vitamin C60 BioResearch Corporation, utilizing the fermentation technology cultivated by Mitsubishi Corporation Life Science over many years.

Fervere, upcycled and sustainable manufacturing process produced from unused resources, is a fermentation functional cosmetic raw material. It will brighten up our future as we devote to beauty, wellness and heartfulness.



Vitamin C60 BioResearch Corporation

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