

For beauty, blood flow improvement, menopause, liver function, anti-fatigue, Reducing oxidative stress

CELABIO®-F

CELABIO®-F is a raw material to which the rice bran extract and the soybean extract are fermented by *Bacillus subtilis* var. *natto*.



Plant-derived skin-beautifying ingredient as good as placenta that reduces wrinkles and restores skin firmness

- This ingredient has an effect to actively proliferate fibroblasts existing in the skin. It also has a strong cell-activating effect, compared to placenta extract.
- It has an effect to promote the production of human type-I collagen and the hyaluronic acid of fibroblasts.
- The results of a monitoring test in humans show that this ingredient has a skin-beautifying effect due to improved water content and restored firmness of the skin, and that users can see improved skin conditions after intake.
(Patent No. 6332941)

Improves circulatory system diseases, sensitivity to cold, and swelling, and improves blood circulation and blood pressure

- This ingredient improves peripheral blood circulation. This helps alleviate sensitivity to cold and swelling in the limbs.
- Continuous intake of this ingredient has an effect to improve systolic blood pressure to an optimal level.

For relieving distressing climacteric disorders: Improves unidentified complaints during menopause

- This ingredient improves various general complaints that women experience during climacteric disorder. (Patent pending)

Promotion of alcohol metabolism

- Acetaldehyde metabolism is stronger than Curcumin, an active ingredient of Turmeric
- Hard to get a hangover
- Activates the enzyme Acetaldehyde dehydrogenase that metabolizes acetaldehyde.

To maintain ability during exercise -Anti-fatigue effect-

- It has the function of suppressing the decrease in ability during exercise and suppressing fatigue.
- It works to reduce the amount of lactic acid, which is a fatigue substance, accumulated after exercise. (Patent No. 5855375)

Reduce oxidative stress in the body

- Works to reduce oxidative stress in the body by eliminating active oxygen.

For metabolic syndrome measures

- It works to reduce triglycerides in the blood.

Product name	CELABIO®-F	TEST	SPECIFICATION	TEST METHOD
Name	Extracted powder material of functional food from fermented rice bran and soybean.	Appearance	White to brown powder	Visual
Example of description of raw materials	Fermented rice bran and soybean extract powder, Dextrin	Odor	fermentation odor	Organoleptic
Standard amount to be used	0.5-5g/day			
Package	1kg in aluminum bag			
Storage	Store it away from direct sunlight and high temperature/humidity			
Expiration date	Three years after manufacturing (No bag opening)			

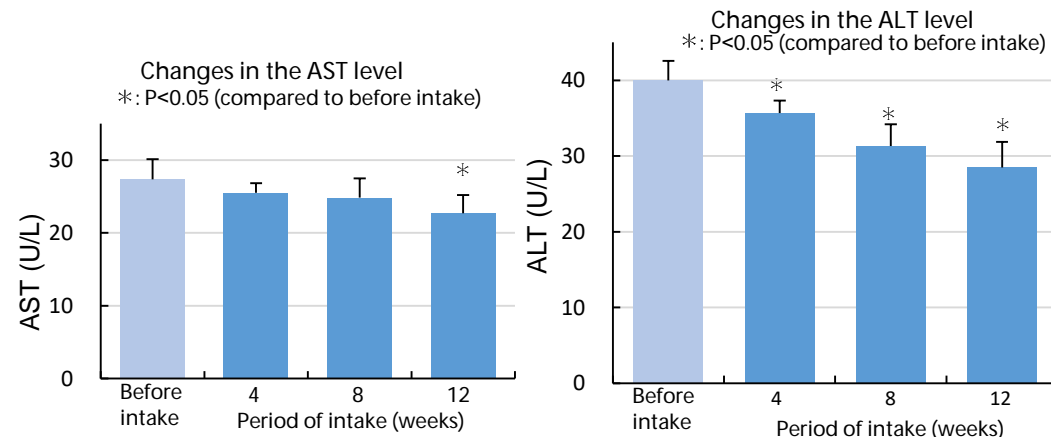
Test for evaluating the effect of improving liver function in humans

<Method>

From 18 healthy male and female adults, six (aged 37 to 58, one female and five males) were selected for having a blood AST or ALT level (liver function indicators) of more than 30 U/L (a value considered as the "health guidance judgement value"), in order to evaluate the effect of CELABIO®-F intake on liver function improvement. CELABIO®-F was taken at 479 mg/day for 12 weeks.

<Results>

The results show that CELABIO®-F intake decreased blood AST and ALT levels significantly from week 12 and week 4, respectively, and that it has an effect to improve liver function in humans.



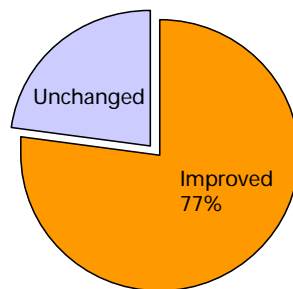
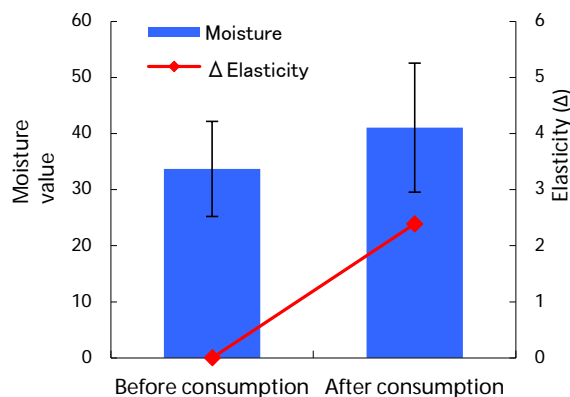
For beauty purposes: Validation test of the effect of enhancing skin beauty in humans (moisture/elasticity)

<Method>

Thirteen men and women consumed 500 mg of CELABIO®-F per day for 28 days, and changes in the moisture and elasticity of their skin (cheek area) were examined before and after. Cyber Skin Checker PT was used to diagnose the skin condition.

<Results>

It has been validated that skin moisture and elasticity improved by continuously consuming CELABIO®-F. A participant survey indicated that 77% of participants sensed improvement in their skin condition.



Percentage of participants that sensed improvement in their skin condition by consuming CELABIO®-F

Evaluation test of improvement in unidentified complaints during menopause

<Method>

A comparison test was conducted before and after the consumption of CELABIO®-F to evaluate its effect of improving unidentified complaints during menopause. The selected subjects were 13 Japanese women between the ages of 40 and 55 who were aware of the perceived unidentified complaints and had a relatively high score in the Kupperman menopausal index.* The subjects consumed 495 mg of CELABIO®-F per day for eight weeks, and the scores of the Kupperman menopausal index* before consumption, four weeks after consumption, and eight weeks after consumption were measured and compared.

* Kupperman menopausal index: A questionnaire for rating the severity of 11 symptom groups of unidentified complaints during menopause on a four-point scale.

Severity Severe: 3/Moderate: 2/Mild: 1/None: 0

Score evaluation: The maximum value of severity for each type of symptom in each symptom group is multiplied by an evaluation factor.

<Results>

The total of the scores in each symptom group is used to determine the severity of climacteric disorder, as shown below.

- Score 16–20: Mild
- Score 21–34: Moderate
- Score 35 and above: Severe

The severity scored as "Severe" before consuming CELABIO®-F was significantly lowered to the level of "Moderate" or "Mild" by consuming it for four or eight weeks, and the effect of improving unidentified complaints during menopause was validated.

Significant improvements over time were achieved not only for the total scores but also for all symptom groups (vasomotor disorder-like symptoms, paresthesia, insomnia, nervousness, melancholia, vertigo, weakness, arthralgia or myalgia, headache, palpitations, and formication).

Therefore, the evaluation of the effect of improving unidentified complaints during menopause by consuming CELABIO®-F has showed a positive result, thus its application as a menopause relief supplement is expected.

