

SOHAKUHI EXTRACT

Introduction

Sohakuhi also known as Mulberries are naturally grown everywhere in Japan and planted for silk raising. Sohakuhi is obtained from the dried skin of the root. Sohakuhi was listed in the oldest Chinese medical book or Shinnohon Zokyo, and was believed to cure bronchitis and asthma. This is because the material is effective for resolution, diuresis, antipyretic action and analgesic action.

Recently Sohakuhi has been used as a whitening agent also because it contains some component which can help whiten human skin. Therefore, Sohakuhi is used as whitening active in skin care applications.

Properties

The darkening of the skin is caused by the activity of tyrosinase. Tyrosinase causes freckles on the skin leading to skin darkening. Sohakuhi contains Phenylflavonoid which has a component that will inhibit the activation of tyrosinase. When the tyrosinase activity is lessened, formation of freckles will lessen as well and prevent the skin from darkening. Sohakuhi also can be used for anti-inflammatory and moisturizing effects in its water soluble structure. Main Components of Sohakuhi is as below :

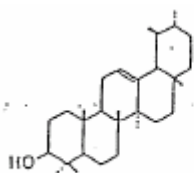
Triterpenoid

α -, β -aryrin ($C_{30}H_{50}O$)

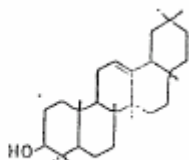
phenylflavone derivative

morusin

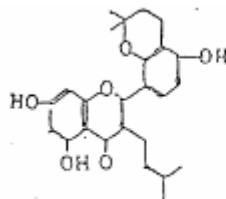
kuwanon A~H



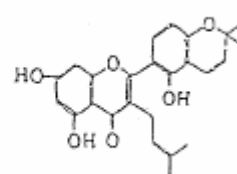
α -amyrin



β -amyrin



kuwanon A



kuwanon B

Comparison of Anti-tyrosinase activities of Sohakuhi Extract powder and other whitening Agents

Materials Ascorbic Acid

Kojic Acid

Hydroquinone

1) Measurement of Anti-tyrosinase activity

Method

Reagent

A. Tyrosine Solution (0.5 mg/ml) 0.5 ml

B. Meta-15 phosphoric Acid Buffer (pH 6.8) 2.0 ml

C. Tyrosinase Solution (6.0mg / 100ml) 0.5 ml

Tyrosinase (Sigma) 2,500 unit/mg

D₁ Sohakuhi Extract powder 2.0 mg / water 100 ml 2.0 ml

0.1 ml, 0.2 ml, 0.4 ml and 1.0 ml of

D₂ Ascorbic Acid 100 mg / water 100 ml (control)

D₃ Kojic Acid 25 mg / water 100 ml (control)

D₄ Hydroquinone 5 mg / water 100 ml (control)

is diluted by Meta-15 phsphoric Acid (pH6.8) to make 2 ml in total.

Procedure

- A. 1) Add A, B, C and D₁ liquid. Incubate for one hour at 37°C. Measure absorbance A_t.
- 2) Add 2.0 ml of Meta-15 phosphoric Acid instead of D₁ liquid. Measure absorbance A_b in same operation as 1).
- 3) Add 0.5 ml of refined water instead of liquid C. Measure absorbance A_o in same operation as 1).

$$\text{Inhibition rate} = \frac{A_b - (A_t - A_o)}{A_b} \times 100 (\%)$$

- B. 1) ~ 3) are repeated about D₂, D₃, D₄ respectively instead of D₁.

Result

Addition	Inhibition Rate			
	Sohakuhi Extract	Ascorbic Acid	Kojic Acid	Hydroquinone
0.002 mg	36.3 %	---	---	---
0.004	45.2	---	---	---
0.008	60.9	---	---	---
0.01	---	---	---	9.2 %
0.02	83.6	---	---	64.2
0.025	---	---	20.0 %	---
0.05	---	---	49.8	100.0
0.1	---	29.9 %	81.0	---
0.2	---	64.8	---	---
0.4	---	---	---	---
0.8	---	100.0	---	---

Addition	Inhibition Rate			
	Sohakuhi Extract	Ascorbic Acid	Kojic Acid	Hydroquinone
1.0	---	100.0	---	---
2.0	---	---	---	---
ED ⁵⁰	5 µg / 5 ml	150 µg / 5 ml	50 µg / 5 ml	16 µg / 5 ml

Absorption of Ab in this measurement is 0.271.

Conclusion

Sohakuhi Extract from Ikeda is widely used in whitening products and it is able to give a good anti-tyrosinase effect. From the study done Sohakuhi Extract powder proved to be 30 times more effective than Ascorbic acid, 10 times more effective than kojic acid and 3 times better than hydroquinone.

Coffee Bean Extract

Introduction

Over eating and the lack of exercise can lead to weight gain and obesity. Obesity then can lead to lifestyle related diseases and one such disease is diabetes mellitus. As a result, the demand for diet foods and supplements for diabetes is increasing.

In the market, often diet foods include ingredients like capsaicin that promotes fat metabolism, chitosan that reduces fat absorption and citrus that promotes lipolysis. There are also ingredients used for cosmetic application to reduce cellulite and reduce fat in the body.

However one ingredient can be used to care for both diabetes mellitus and obesity. This ingredient is called coffee beans which has abundant chlorogenic acids and caffeine. Chlorogenic acid has been long avoided due to its bad taste of coffee. However, recently a German pharmaceutical company this ingredient is a selective inhibitor of glucose-6-phosphate, a rate limiting enzyme involved in gluconeogenesis in the liver.

It was found that raw coffee beans possess higher concentration of chlorogenic acid as compared to roasted coffee. Meanwhile, caffeine, the main component in coffee is proven to enhance physical endurance and capabilities. Hence, it will promote energy utilization and lipolysis.

Functions

1. Medicinal compound – Today caffeine is listed in Pharmacology Textbooks as CNS stimulant and diuretic.
2. Antioxidative Effects – A study in Italy shows that coffee has the greatest Total Antioxidant Capacity compared to 34 other beverages.
3. Prevention Against Liver Cirrhosis – Caffeine, a member of the methylxanthine alkaloids, is capable of degrading and excreting acetaldehyde from alcohol.

4. Prevention against atherosclerosis – Effect of coffee in gastric potential difference showed that total cholesterol and high density lipoprotein (HDL) cholesterol are significantly lower in subjects consuming coffee.
5. Prevention of rectal diseases – Risk of rectal cancer reduces with daily intake if 3 cups or more of coffee

Properties

Raw coffee beans rich in **chlorogenic acid** and its related compound such as *quinic acid*, *p-coumaric acid*, and *caffeic acid*. Coffee is rapidly absorbed and reaches peak plasma concentration within 1 hour.¹ About 1/3 of chlorogenic acid absorbed orally and usually exist in the form of sulfates of caffeic acid or its glucuronide conjugates.^{1,2} Studies indicated that chlorogenic acid inhibits the action of glucose-6-phosphatase, a rate-limiting enzyme involved in gluconeogenesis in the liver³ & promotes insulin secretion.⁴ Gluconeogenesis is usually prevented when glucose intake is restricted and this leads to muscle wastage. Thus, rebound effect of weight gain is greater when normal diet resumes. Clinical study reported that daily consumption of 90mg chlorogenic acid assist in a mean inhibition of 15%-20% in postprandial. Recommended dosage for effective results is between 1%-3%.

SEMBURI EXTRACT

Introduction

Semburi or Swertia Herb in Japanese means “one thousand time extraction”. This herb has been used effectively as medicine for stomachaches, influenza, nettle rash, menstrual-irregularity, and congenital syphilis. It can also expel noxious skin parasites and keep the stomach in good condition.

In recent studies Semburi also proved to be an effective ingredient for preventing premature baldness in males and alopecia areata. Therefore, Semburi is applicable not only for internal medicine but also for external use in hair tonics and hair-care products for the purpose of hair growth and hair loss prevention.

Uses

Hair Growth :

The bitter component of Semburi directly stimulates hair follicles and activates the blood current of hair roots. Moreover, it enhances the oxidation-reduction reaction and revitalizes hair cells. Due to the combination of these functions, Semburi stimulates hair growth.

Medical Efficacy :

A test was conducted using rabbits to check skin temperatures. First, the skin temperature of the rabbit was taken at room temperature. Semburi was then applied to the skin. The rabbits were then placed in a cold room and their skin temperature was taken again. According to the test, the rise of the skin temperatures and the return of them to a normal condition were shortened in duration. The part of the skin which was constantly applied with Semburi was a healthy pink and had no side effects such as topical blood congestion, dead organization, etc.

When the rabbits received the venous injection of Semburi, the blood in their peripheral vessel increased, the skin temperatures rose and the oxidation-reduction reaction on their skin accelerated.

Properties

Main Components of Semburi :

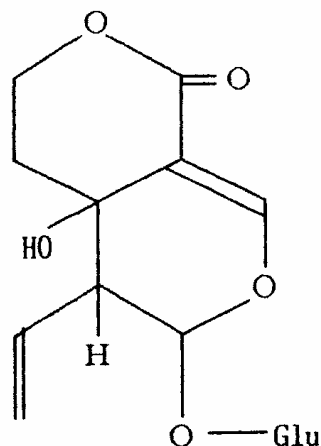
Swertiamarin ($C_{16}H_{22}O_{10}$)

Swertianolin ($C_{20}H_{20}O_{11}$)

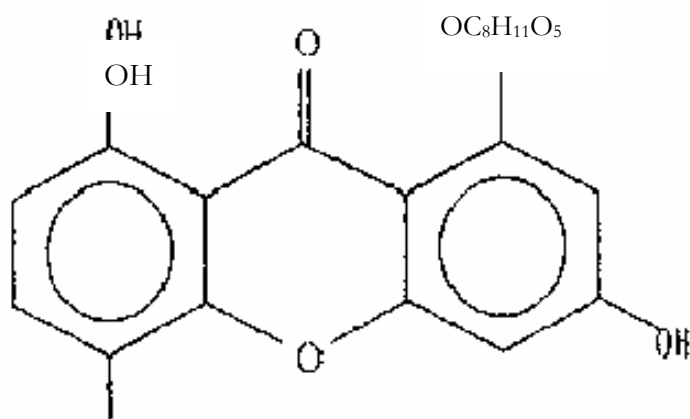
Erythrocentaurin ($C_{10}H_8O_3$)

Swertianol ($C_{14}H_{10}O_6$)

Chemical structure



Swertiamarin ($C_{16}H_{22}O_{10}$)



OH

OCH₃

Swertianolin ($C_{20}H_{20}O_{11}$)

As listed in the Pharmacopoeia of Japan, Semburi is allowed for medical use. In our line of products, Semburi Extract BG and Semburi Extract Ethanol are listed under quasi-drugs and are designed for hair-growth and hair-loss prevention.

Conclusion

Name of Product	Base	Appearance	Efficacy
SEMBURI EXTRACT BG	1-3 Buthylene Glycol	Yellowish Brown Transparent Viscous Liquid, Very Bitter Taste, Soluble in Water	Hair-Growth Hair-loss Prevention, Thicken Thin Hair

Formulas

1. Whitening Cream (CA/CR/004/07)
2. Whitening Cream IKLT-0108/DEC2004
3. Hair Tonic B IKLT-0117/JUL152005

Please try our products and feel the different by yourself or you can simply call us for more formulas!!!

Contact Us Today!

Whether it is a sales enquiry or a sample request kindly contact us right away:

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