# Citrus Narirutin®30

Nature Life 自然からの思恵

シトラスナリルチン®30

## Citrus Narirutin30

It is a functional ingredient derived from the peel of "JABARA" that has been extracted, powdered, and achieved a content of 30% or more of the anti-allergy component called "narirutin," which is believed to be effective against type I allergies such as hay fever and atopic dermatitis. It is the world's first high-concentration, water-soluble powdered type of Jabara extract.



# What's JABARA (邪払)

"JABARA" is a Japanese native citrus fruit classified under the Rutaceae family within the genus Citrus, and it is said to have been growing naturally in Kitayamamura, Wakayama Prefecture. The name is believed to originate from "warding off evil spirits" or "banishing negativity."

"JABARA," which was registered as a new variety in 1979, was found to be the world's only new species at that time. People who consumed JABARA frequently reported multiple times that it alleviated symptoms of hay fever. Subsequent investigations and research experiments conducted by various universities revealed that jabara contains a significantly higher amount of a flavonoid called "narirutin" compared to other citrus fruits. It gradually became evident that "narirutin" had the potential to alleviate allergy symptoms such as hay fever.





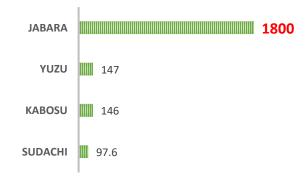
# Safety and Efficacy

#### The safety test results for jabara fruit peel extract.

Test	Target	Result
90-day oral administration by repetitive dosing	Rats	No abnormalities observed in low- dose group or high- dose group. The NOAEL is 240mg/kg/day.
Reverse mutation test	Bacteria	Does not possess mutagenic potential.

The approximate intake recommendation for narirutin is 10 mg, assuming a human body weight of 50 kg. This corresponds to 0.2 mg/kg/day. In the study, a low-dose group was set at 20 mg/kg/day, which is more than 100 times the daily intake for humans, and a high-dose group was set at 120 mg/kg/day. The test substance used had a narirutin content of 8.6%.

#### Comparison of Narirutin Content in Fruit Peels (Unit: mg/100g)



"Conducted by the National Agriculture and Food Research Organization and the Japan Food Analysis Center (a public corporation)."

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# **Application Examples of Citrus Narirutin® 30**



### **Healty Foods**

Tablets, Powder, Capsule, Beauty drinks, Special pet food(special therapeutic food), Probiotic Formulation, ect...

#### Processed food: confectionery

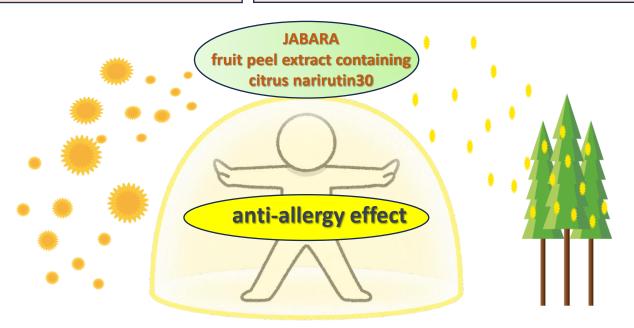
Beverage (Functional/Juice), Jelly Beverage, Jelly, Gummy, Candy, Powdered Beverage, Chocolate, Gum, Tablet (Oral Care, Refreshment), Other Nutritional Supplements, ect...

#### **Processed food: others**

Soup, Dressing, Coffee, English tea, Herbal tea, Fruit sauce, Jam, yogurt, Bread, Cereal, ect...

#### **Foodservice supplies**

Foodservice products, Fast food products, Frozen foods, Ready-to-eat foods or Ready meals, ect...



# **Efficacy**

# The number of sneezes and nose blow 120 100 80 40 20 1 2 3 4 days after dosing (week(s))

"Testing institutions: Ishinomaki Senshu University and Shinyaku Research Center, Inc."

"We used a mouse OVA-sensitized rhinitis model to investigate the differences in sneezing and nose scratching frequency between groups with and without CN30 intake. We recorded and analyzed video footage during the rearing period." ("Once a week, we conducted 30 minutes of video recording over a period of four weeks.")

"The results showed a clear difference in the number of occurrences between the comparison group with and without intake, with a decrease in the frequency in the CN30 intake group."