

ROSE CRYSTA®(Rose Petal Extract) is a revolutionary functional material without adverse reaction to allergic disease patients whose numbers have been increasing recently.



## Characteristics

### For UV protection and Skin-lightening, by eating

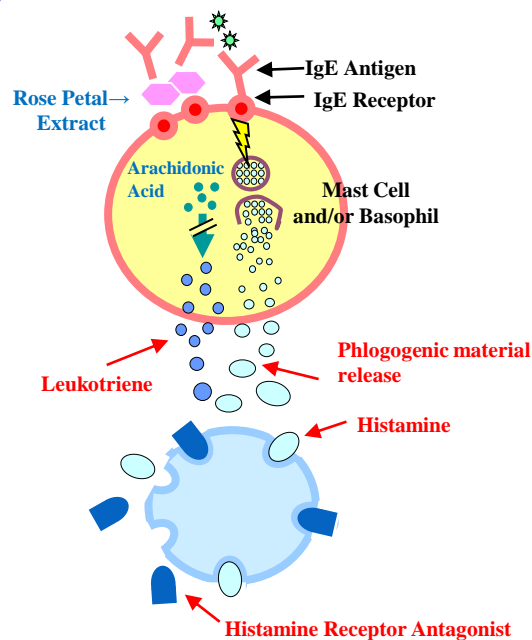
- Powder extracted, concentrated and spray-dried from wild species rose petal.
- About 123,000 pieces of petal are needed to prepare for 1 kg of ROSE CRYSTA®
- Eugenin was first identified to be the main ingredient for anti-allergy and its content was specified.
- Inhibit IgE from binding IgE receptor (Patent:JP-4097300)
- By histamine release inhibition, sneeze, runny nose and itch can be lightened.
- Effective not only to seasonal allergy symptom by pollen, but also to perennial one.

### About Allergy

Allergic disease patients have rapidly increased in Japan in recent years owing to the change of life environment, dietary habit and so on. Especially the disease patients of pollen allergy, allergic rhinitis, bronchial asthma and atopic dermatitis have reached about 30% of the entire population. Those are called Type I allergy and the patients' number might be more, because house dust, mite, etc. could also be allergen. However there is no specific medicine for complete recovery, though some alleviate symptoms.

Since medicine shows adverse reaction in some cases, promptly effective natural ingredients without adverse reaction are wanted. ROSE CRYSTA® was found to be suited for that purpose.

### Mechanism of Type I allergy



Product name	ROSE CRYSTA®	TEST	SPECIFICATION	TEST METHOD
Name	Powder of rose petal extract	Appearance	Red purple to red brown powder	Visual
Example of description of raw materials	Rose petal extract, Dextrin			
Standard amount to be used	500-1000 mg/day (functional food applications) 50-100mg/day (general foods)	Odor	Slight odor	Organoleptic
Package	1kg in aluminum bag x 6/ carton box			
Storage	Store it away from direct sunlight and high temperature/humidity	Polyphenol content	10±2%	Folin-ciocalteu
Expiration date	Three years after manufacturing (No bag opening)			

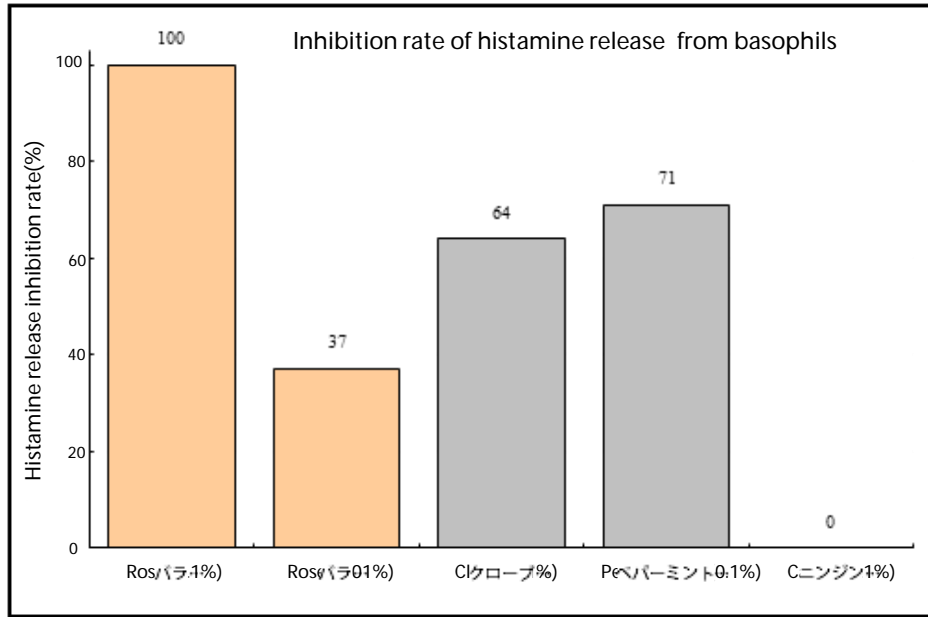
## Comparison with various plant hot water extracts of IgE binding inhibition to IgE receptor

Enzyme Immunoassay revealed that rose petal extract inhibited IgE binding to IgE receptor by 100% (0.1%) and 41% (0.01%), while other plant extracts had less or no activity. Even Perilla extract which was reported to have ant-allergic activity showed no binding inhibition.

Category	Kind	Binding inhibition rate (%)	
		Concentration 0.1%	Concentration 0.01%
Flower & Foliage plant	<b>Rose</b>	<b>100</b>	<b>41</b>
	Statice	67	11
	Sword fern	36	0
	Pennyroyal	30	0
	Dahlia	20	0
	Rose fruit	0	0
Herb	Cat nip	65	0
	Apple mint	58	0
	Sweet basil	40	0
	Sage	37	0
	Fennel	8	0
	Lemon grass	0	0
Vegetable	Mulukhiya	35	0
	Asparagus	11	0
	Broccoli	10	0
	Lettuce	9	0
Fruit	Carrot	0	0
	Banana	0	0
	Orange	0	0
	Peach	0	0
	Cherry	0	0
Essential oil	Strawberry	0	0
	Clove oil	1	0
	Rosemary oil	0	0
Others	Pepper mint oil	0	0
	Perilla extract	0	0
	Acanthopanax senticosus Harms extract	0	0

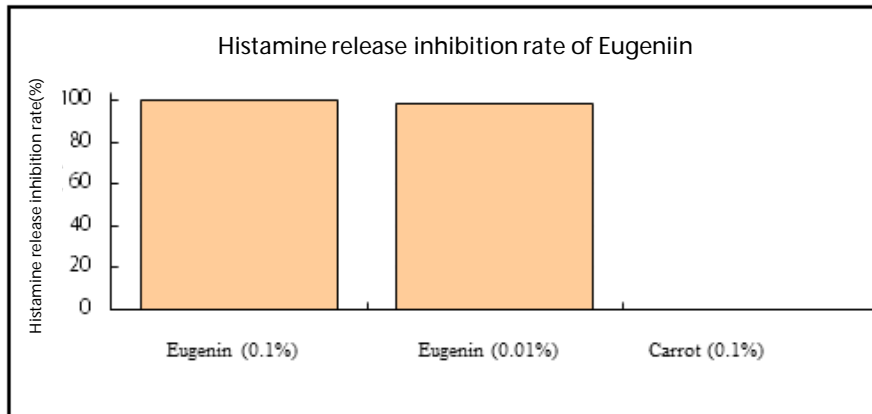
## Inhibitory effect on histamine release from basophils

ROSE CRYSTA® almost completely inhibited histamine release from basophils. The effect is stronger in ROSE CRYSTA than in extract of clove or pepper mint.



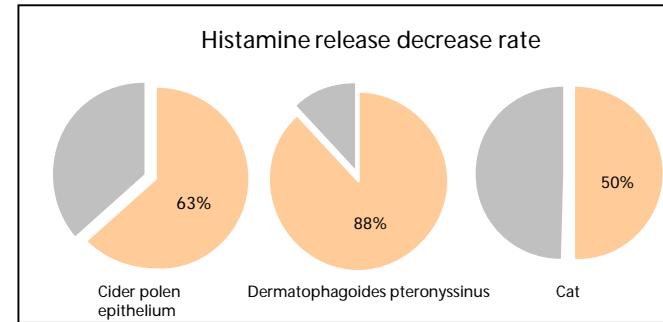
## Histamine release inhibitory effect of Eugenin

Eugenin has the potency to control histamine release by itself, which shows eugenin contained in ROSE CRYSTA® can be one of anti-allergic ingredients.



## Human clinical study (Histamine release suppression effect)

Adult subjects who have allergy symptom took ROSE CRYSTA® for 30 days and each histamine release quantity was measured. Its decrease was found on many subjects.



## The effect of atopic dermatitis improvement in human

Adult patients of atopic dermatitis took rose petal extract for 30 days and before & after the intake, the severity score of atopic dermatitis and the number of eosinophil were evaluated. LDH is the abbreviation of lactate dehydrogenase, which is the indicator of inflammation in the body and gets higher at the inflammation by atopic dermatitis. Eosinophil is one type of white blood cell and also gets higher in case of allergic diseases. Blood test results are estimated to indicate in advance the change which doesn't appear on the surface in case of diseases. The change might appear later as the symptom of disease.

