



## MARINE SCIENCE CO., LTD.

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### CARRAGEENAN NL-V

Manufactured at	Japan
Importer	MARINE SCIENCE CO.,LTD.
Summary	

NL-V is mixed Kappa and Lambda types carrageenan which have taste-less and smell-less natural polymeric hydrocolloid extracted from red algae (*Chondrus Crispus* ).  
 It is taste-less and no-smell natural polymeric hydrocolloid.

Characteristics	
	<p>① NL-V have water solubility, it should be mix together with sugar when before dispersion for avoid un-mixed clumps.          ② NL-V have soft reaction with metal ions, gel and viscosity will not drastically change by minerals.          ③The water solution have pseudoplastic (non-Newtonian) viscosity.</p>

Expiration Date	unopened	24 months from date of manufacture (Storage at dry and cool room)
	opened	30 days(Storage at dry and cool room)
Package	Outer	Carton box
	Inner	Low-density Polyethelene bag for food (20kg × 1bag )
Ingredients labeling	Carrageenan	

### Information of Material

GMO material	No use the GMO materials and their processed.
Allergen material	No use the materials of rice, crustacean and the product origin including the 25 items is assigned by
Bovine original	No use the materials origin livestock meets including brain, eye, spinal cord, and around bowel
Agricultural chemical residual	Never used agrichemicals. or We would ensure standard value based of the Food hygiene law
Unapproved Ingredient	No use the unapproved Ingredient in Japan.

### Product specifications

Standardize Items	Specifications	Analysis method
Type of Carrageenan	Kappa-Lambda type	
Appearance	White or Light gray powder	
Particle size	Pass 200mesh more than 85%	Passed JIS Standard sieve
Loss on dry	Less than 12%	Japanese standard of Food additive seventh edition 'Refined carrageen
pH	7.0~9.5	1.0% sol. at 60°C, pH meter
Viscosity (75°C)	50 ~ 125 m Pa/s	1.0% sol. at 75°C
Viscosity (30°C)		1.5% sol. at 30°C
Water gel strength	Not more than 30g/cm2	1.5% sol. at 20°C, Rheo meter
Solt gel strength		1.5% + 0.2% KCL sol. at 20°C, Rheo meter
Milk gel strength		0.5% + 10% Skim milk gel, at 20°C, Rheo meter
Plate coliform count	Less than 1000 /g	Japanese standard of Food additive seventh edition 'Refined carrageen
Coliform	Negative	BGLB broth
E.coli	Negative	Japanese standard of Food additive seventh edition 'Refined carrageen
Yeast & Mold	Less than 100 /g	Japanese standard of Food additive seventh edition 'Refined carrageen
Sulfate	15~30%	Japanese standard of Food additive seventh edition 'Refined carrageen
Acid insoluble	Less than 2%	Japanese standard of Food additive seventh edition 'Refined carrageen
Ash	15~30%	Japanese standard of Food additive seventh edition 'Refined carrageen
Ash acid-insoluble	Less than 1%	Japanese standard of Food additive seventh edition 'Refined carrageen
Arsenic( as AS <sub>2</sub> O <sub>3</sub> )	Less than 2 μ g/g	Japanese standard of Food additive seventh edition 'Refined carrageen
Heavy metal(as Pb)	Less than 20 μ g/g	Japanese standard of Food additive seventh edition 'Refined carrageen