



MARINE SCIENCE CO., LTD.

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FOOD ENGREDIENT		
QUALITY SPECIFICATION		
Product	TS-200	
Manufacturer	TACARA SDN BHD (MALAYSIA)	
Importer	MARINE SCIENCE CO.,LTD.	
Summary	TS-150 is Iota type pure semi-refined carrageenan which composition has natural high polymeric hydrocolloid extracted from red algae (<i>Eucheuma Denticulatum</i>).	
Characteristics of TS-200	① TS-200 have smell-less, taste-less and creamy color powder manufactured at sanitary and modern factory in Malaysia ② TS-200 have excellent protein reaction with cow's or Soyabean milk which makes quite elastic pudding. ③ The L.B.G. is pull up viscodsity of solution or makes elastic gel. ④ TS-200 have faculty of restroration to its original state of low water syneresis gel from defrost frozen gel. ⑤ Ca Ion is good effect for pull up viscosity of solution.	
Expiration Date	unopened	24 months from date of manufacture (Storage seal and dry at refrigrate)
	opened	30 days (Storage seal and dry at refrigrate)
Package	Outer	Carton box or Paper craft bag
	Inner	Low-density Polyethelene bag for food (25 kg × 1bag)
Labeling for usage of food		
Information of 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 Japan	
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 hygine law	
Unapproved Ingredient	No use the unapproved Ingredient in Japan.	
Product standard		
Standardize items	Specifications	Analysis method
Production No.		
Particle size	200mesh pass >98%	150 mesh of Japanese Industrial Standard Sieve
Loss on dry	not more than 10%	dried 4h at 150°C
pH	8 ~ 10	1.0% sol. at 60°C by PH meter
Viscosity (75°C)	30 ~ 100 mPa·s	1.5% sol. at 75°C by B type viscosity meter
Viscosity (30°C)	500 ~ 1000 mPa·s	1.5% sol. at 30°C by B type viscosity meter
Viscosity with Ca(30°C)	2000 ~ 3000 mPa·s	1.5% + 0.2% CaCl2 sol. at 30°C
Water gel strength	~ g/cm ²	1.5% gel. at 10°C, measure inside-gel by reo-meter
Salt gel strength	~ g/cm ²	1.5% + 0.2% KCL gel at 10°C, same as WG
Milk gel strength	20 ~ 30 g/cm ²	0.5% + 10% skim milk gel at 10°C, same as WG
Total plate count	not more than 1,000/g	Standard method Agar
Coliform	negative	Desoxycholate Agar
E. coli	negative	Brilliant Green Lactose Bile Broth, EMB
Yeast & Mold	negative	Potato dextrose Agar
Sulfate	15 ~ 40%	Japanese standard of Food additive seventh edition 'Refined carrageenan'
Acid insoluble matter	8 ~ 18%	Japanese standard of Food additive seventh edition 'Refined carrageenan'
Ash	15 ~ 35%	Japanese standard of Food additive seventh edition 'Refined carrageenan'
Acid insoluble Ash	not more than 2%	Japanese standard of Food additive seventh edition 'Refined carrageenan'
Arsenic as AS ₂ O ₃	not more than 2 μ g/g	Japanese standard of Food additive seventh edition 'Refined carrageenan'
Heavy metal as Pb	not more than 20 μ g/g	Japanese standard of Food additive seventh edition 'Refined carrageenan'