



# MARINE SCIENCES CO., LTD.

Daiichi Sakamoto Building 7F, 2-1-11,

Tel :81-3-3865-3485

Higashi-Kanda, Chiyoda-Ku, Tokyo 101-0031 Japan Fax:81-3-3865-3450

URL <http://www.marine-science.co.jp> e-mail: [info@marine-science.co.jp](mailto:info@marine-science.co.jp)

FOOD INGREDIENT			
QUALITY SPECIFICATION			
Product	TCC-H		
Manufacturer			
Importer	MARINE SCIENCE CO.,LTD.		
Summary	TCC-H is alkali treated cottonii chips that compose high molecular Kappa type carrageenan to produce super quality physical results. Processed from Kappaphycus Alvarezii (Eucheuma Cottonii) of Red Algae (Rhodophyta seaweed)		
Characteristics	① It have quite high viscosity and gel strength ② It have no smell, no taste and creamy color seaweed chips. ③ It have reaction to pulling up gel strength with K+, Ca+ and Mg. ④ The combination with L..B.G. will be makes quite elastic and high strength gel ⑤ It also makes excellent gel with ordinary (cow's) and soyabean milk. ⑥ It is good effect for milk products, processed meat and fish products.		
Expiration Date	unopened	24 months from date of manufacture (keep dry in cool storage)	
	opened	60 days (seal and keep it in cool storage)	
Package	Outer	Poly-propylene bag	
	Inner	Polypropylene or Polyethelene bag (25~40 kg)	
Labeling for usage of food			
Information of Material			
GMO material	No use the GMO material and their product.		
Allergen material	No use the 25 items of allergen materials, fish and shellfish		
Bovine original	No use the materials origin livestock meets including brain, eye, spinal cord, and around bowel		
Agricultural chemical residual	Never used agricultural chemicals.		
Unapproved Ingredient	No use the unapproved Food Additive Ingredient in Japan.		
Product standard			
Standardize items	Specifications	Analysis Result	Analysis method
Production No.			
Particle size	Form of chips		
Loss on dry	not more than 15%		dried 4h at 150°C
pH	8 ~ 10		1.0% sol. at 60°C by PH meter
Viscosity (75°C)	300 ~ 500mPa·s		1.5% sol. at 75°C by B type viscosity meter
Viscosity (30°C)			1.5% sol. at 30°C by B type viscosity meter
Viscosity with Ca(30°C)			1.5% + 0.2% CaCl <sub>2</sub> sol. at 30°C
Water gel strength	250 ~ 350g/cm <sup>2</sup>		1.5% gel. at 10°C, measure inside-gel by reo-meter
Salt gel strength	600 ~ 800g/cm <sup>2</sup>		1.5% + 0.2% KCL gel at 10°C, same as WG
Milk gel strength	200 ~ 300g/cm <sup>2</sup>		0.5% + 10% skim milk gel at 10°C, same as WG
Total plate count	/g		Standard method Agar
Coliform			Desoxycholate Agar
E. coli			Brilliant Green Lactose Bile Broth, EMB
Yeast & Mold			Potato dextrose Agar
Sulfate	15 ~ 40%		Follow to Japan food additive official method
Acid insoluble matter	8 ~ 18%		Follow to Japan food additive official method
Ash	15 ~ 35%		Follow to Japan food additive official method
Acid insoluble Ash	not more than 2%		Follow to Japan food additive official method
Arsenic as As <sub>2</sub> O <sub>3</sub>	not more than 2 μg/g		Follow to Japan food additive official method
Heavy metal as Pb	not more than 20 μg/g		Follow to Japan food additive official method



FOOD INGREDIENT			
QUALITY SPECIFICATION			
Product	TSC-H		
Manufacturer			
Importer	MARINE SCIENCE CO.,LTD.		
Summary	TSC-H is alkali treated spinosum chips that compose high molecular Iota type carrageenan to produce super quality physical results. Processed from Eucheuma Denticulatum (Eucheuma Spinosum) of Red Algae (Rhodophyta seaweed). extracted from		
Characteristics	① It have quite high viscosity and elastic milk gel strength ② It have no smell, no taste and creamy color seaweed chips. ③ The combination with L..B.G. will be makes quite elastic and high strength gel ④ It also makes excellent gel with ordinary (cow's) and soyabean milk. ⑤ It is good effect for milk products, processed meat and fish products. ⑥ Ingredient of refined carrageenan		
Expiration Date	unopened	24 months from date of manufacture (keep dry in cool storage)	
	opened	60 days (seal and keep it in cool storage)	
Package	Outer	Poly-propylene bag	
	Inner	Polypropylene or Polyethelene bag (25~40 kg)	
Labeling for usage of food			
Information of Material			
GMO material	No use the GMO material and their product.		
Allergen material	No use the 25 items of allergen materials, fish and shellfish		
Bovine original	No use the materials origin livestock meets including brain, eye, spinal cord, and around bowel		
Agricultural chemical residual	Never used agricultural chemicals.		
Unapproved Ingredient	No use the unapproved Food Additive Ingredient in Japan.		
Product standard			
Standardize items	Specifications	Analysis Result	Analysis method
Production No.			
Particle size	Form of chips		
Loss on dry	not more than 15%		dried 4h at 150°C
pH	8 ~ 10		1.0% sol. at 60°C by PH meter
Viscosity (75°C)	300 ~ 500mPa·s		1.5% sol. at 75°C by B type viscosity meter
Viscosity (30°C)	3000 ~ 5000mPa·s		1.5% sol. at 30°C by B type viscosity meter
Viscosity with Ca(30°C)			1.5% + 0.2% CaCl2 sol. at 30°C
Water gel strength			1.5% gel. at 10°C, measure inside-gel by reo-meter
Salt gel strength			1.5% + 0.2% KCL gel at 10°C, same as WG
Milk gel strength	80 ~ 150g/cm <sup>2</sup>		0.5% + 10% skim milk gel at 10°C, same as WG
Total plate count	/g		Standard method Agar
Coliform			Desoxycholate Agar
E. coli			Brilliant Green Lactose Bile Broth, EMB
Yeast & Mold			Potato dextrose Agar
Sulfate	15 ~ 40%		Follow to Japan food additive official method
Acid insoluble matter	8 ~ 18%		Follow to Japan food additive official method
Ash	15 ~ 35%		Follow to Japan food additive official method
Acid insoluble Ash	not more than 2%		Follow to Japan food additive official method
Arsenic as AS <sub>2</sub> O <sub>3</sub>	not more than 2 μg/g		Follow to Japan food additive official method
Heavy metal as Pb	not more than 20 μg/g		Follow to Japan food additive official method