

FRSI Co., Ltd. established in 2016 applied the organic combination technology of marine medical life science and biochemistry for corporate purpose of “Securing sustainable and safe food resources and protecting the marine ecosystem, “It has allowed us to obtain the base technology for Drug Discovery Technology (natural antifouling ingredients/fish and shellfish disease treatment development, etc.) and Drug Delivery Technology (bio epoxy resin and micro-encapsulation technology, etc.) As mass-produced product to which the above technology is applied, we have acquired excellent patented technology for “Eco-friendly antifouling coating composition based on bio epoxy resin, manufacturing method thereof, and eco-friendly antifouling coating film containing the same. “FRSI Co., Ltd. is an intellectual property-based biomaterial specialized company that manufactures eco-friendly antifouling paint, eco-friendly antimicrobial coatings, eco-friendly waterproof coatings and eco-friendly aquaculture equipment

### A company specializing in marine biotechnology and biomaterials

<b>Food Resources &amp; Safety</b>	<ul style="list-style-type: none"> <li>– Development of safe and sustainable food resources and support project</li> <li>– Marine Medical Life Science &amp; Biomaterials</li> </ul>
<b>Aquaculture &amp; Antifouling</b>	<ul style="list-style-type: none"> <li>– Natural Drug Discovery and Delivery System</li> <li>– Establishment of genetic database such as marine organisms/diseases</li> <li>– Development and supply of customized eco-friendly antifouling ingredients / antifouling paint, etc.</li> </ul>
<b>Bio-materials</b>	<ul style="list-style-type: none"> <li>– Development and manufacture of bio epoxy resin / bio plastic</li> <li>– Development and manufacture of fish and shellfish disease prevention and treatment drugs / eco-friendly antifouling ingredients</li> <li>– Development and manufacture of novel marine derived bio materials</li> </ul>

### FRSI's current status of certification

				
Certificate of patent registration	Certificate of trademark registration	International certificate of trademark registration	Approval of a venture company	Approval of a specialized company for materials/parts/equipment
				
Chinese certificate of patent registration	Certificate of designation of Excellent product	Korea Eco-Label	Certificate of green technology	International certificate of classification for shipping

### Sales Network

	<b>DSR CO., LTD</b> Distributor in Korea, North America, Latin America and Southeast Asia E-mail : sslee@dsr.com Tel : +82-2-3420-3530   Fax : +82-2-3420-3600
	<b>B.H.N CO., LTD</b> Distributor in Vietnam and Thailand E-mail : bhnenc@gmail.com Tel : +84-28-668-101-95   Tel: +84-834-973-273
	<b>KhaiEL CO., LTD</b> Strategic partner in EU and China / Distributor for livestock industry in Korea E-mail : maricare@khaiel.com Tel : +82-31-384-2678   Fax : +82-31-384-2680
	<b>CHORI CO., LTD</b> Exporting agency in Japan / Distributor in Indonesia E-mail : hi-tsuji@chori.co.jp Tel : +81-3-5781-6402   Fax : +81-3-5781-6848



**MariCare** <sup>우리바다지킴이®</sup>

Sustainable and Safe Food Resources and Marine Environment

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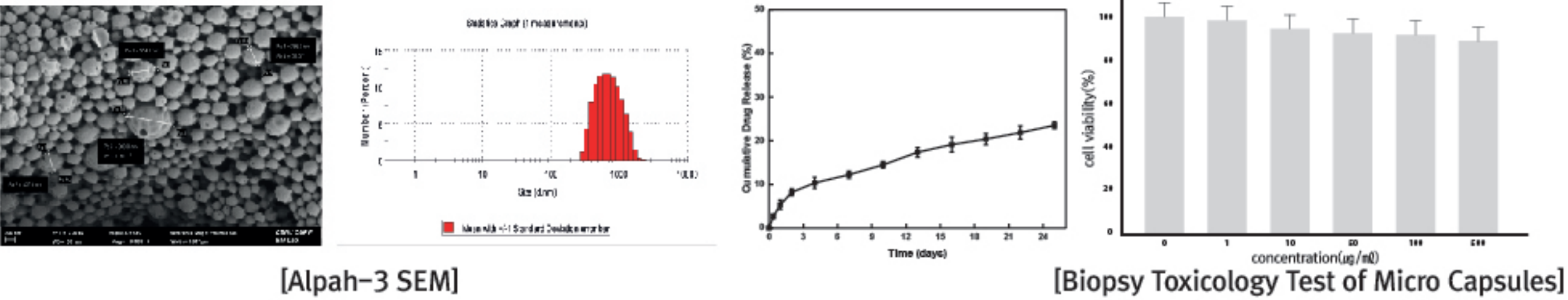
Biopharmaceutical business

Eco-friendly biopharmaceutical business

Securing the base technology for development of disease treatments and eco-friendly antifouling ingredients in the aquaculture industry

Development of Pharmaceutical ingredients for antifouling/antimicrobial and therapeutic purpose

Development of natural Pharmaceutical ingredients for antifouling and treatment purposes and acquisition of eco-friendly binders and micro-coating technology for drugs



Drug Discovery

- Development and commercialization of Pharmaceutical ingredients based on natural eco-friendly raw materials/ antifouling ingredients (Currently, 6 types have been succeeded to mass-produce which are applied to antifouling paint and treatment)
- Establishment of a prescription system for various causative diseases (the joint research on progress)

Drug Delivery

- Securing a binder based on bio-epoxy resin
- Securing eco-friendly materials and Micro Coating technology
- Completed development of Micro Capsule Platform supporting various drugs (it verifies over the 90% viability rate of cells of a living body for 24 hours up to 500µm/mL)

Project of developing eco-friendly antifouling paint

Development of eco-friendly antifouling paint

Developed and released eco-friendly antifouling paint/eco-friendly antimicrobial coatings /eco-friendly waterproof coatings to solve the environmental hazardous problems such as emission of heavy metals, environmental hormones, and micro-plastics from existing antifouling paints and create and apply organic farming environment by proving non-toxicity of fish and shellfish such as farmed fish, shrimp, and diatoms

FRSI’s excellent patent technology of developing eco-friendly antifouling paint

Step1. Epoxy-modified fatty acids Ester-processed process		Step2. Bio-epoxy resin Composition process	Step3. Eco-friendly antifouling paint Manufacture process	
100% vegetable oil	Pre Polymer	Specialized hardener / additive	Technology of developing eco-friendly antifouling ingredients Eco-friendly antifouling ingredients, Micro- capsulizing	Eco-friendly antifouling paint Securing excellent antifouling effects, ecosystem safety, mass production, and economic feasibility
Bio epoxy resin, Bisphenol free			Eco-friendly antifouling paint tin-free and copper compound-free	
		UV curing system, Solvent and thinner free		

MariCare’s eco-friendly antifouling paint

[A/F Aqua(A) epoxy 2000 VOC-0.1g/L]



Eco-friendly diluent  
[Ethanol]

4L / 18L / 200L (Please inquire separately for bulk purchase)

- The first Korea Eco-Label for antifouling paint (certified by the Ministry of Environment)
- Eco-friendly component verified: heavy metal not detected/VOC-0.1g/L/bio-carbon content 100%
- Appointed as Excellent Products & Excellent Inventions by the Public Procurement Service, priority purchase/mandatory purchase/ optional contract products with green certification
- Marine safety verified: Excluding 100% copper compound, a biodegradable resin
- Antifouling performance: Prevent attachment of barnacles, seaweeds more than 90%/excellent antibacteria function (99.9%) and antifungal function (“0=None”)
- Proof of non-toxicity in acute toxicity tests such as fish and shrimp
- Application: Offshore construction such as ships, berth facilities, tide locks and aquaculture facilities such as fishing nets, abalone shelters, buoys, etc. and inland concrete water tanks, etc.

MariCare’s eco-friendly antimicrobial coating

[A/M Aqua(A) epoxy 1000 VOC-0.1g/L]



4L /18L (Please inquire separately for bulk purchase)

- Korea Eco-Label for antimicrobial coating (certified by the Ministry of Environment)
- Excellent antibacterial performance: 99.9% antibacterial effect against micro-organisms and disease-causing bacteria (FITI N28821-00039)
- Marine safety: Eco-friendly antimicrobial products made of natural materials excluding active biocides
- Application : Various water tanks such as concrete, PVC, PP, PC, etc. used in freshwater and seawater, inland aquaculture farms, facilities for agriculture and livestock such as feeding facilities, water supply facilities, raising facilities, etc.

MariCare’s eco-friendly waterproof coating

[A/W Aqua(A) epoxy 100 VOC-0.1g/L]



18L (Please inquire separately for bulk purchase)

- Korea Eco-Label for waterproof coating (verified by the Ministry of Environment)
- Excellent waterproof performance: Waterproof test verification (CT21-048773, Korea Conformity Laboratories)
- Marine safety: : Proof non-toxicity in acute toxicity tests such as fish (NT21-000661C, Korea Conformity Laboratories)
- Application: Concrete inner walls for inland and marine aquaculture farms such as freshwater and seawater and general water tank, internal and external walls of buildings, concrete, wood, and plastic equipment used for aquaculture equipment, etc.

MariCare’s eco-friendly aquaculture equipment

[Eco-friendly antifouling abalone cage nets and abalone shelters, etc.]

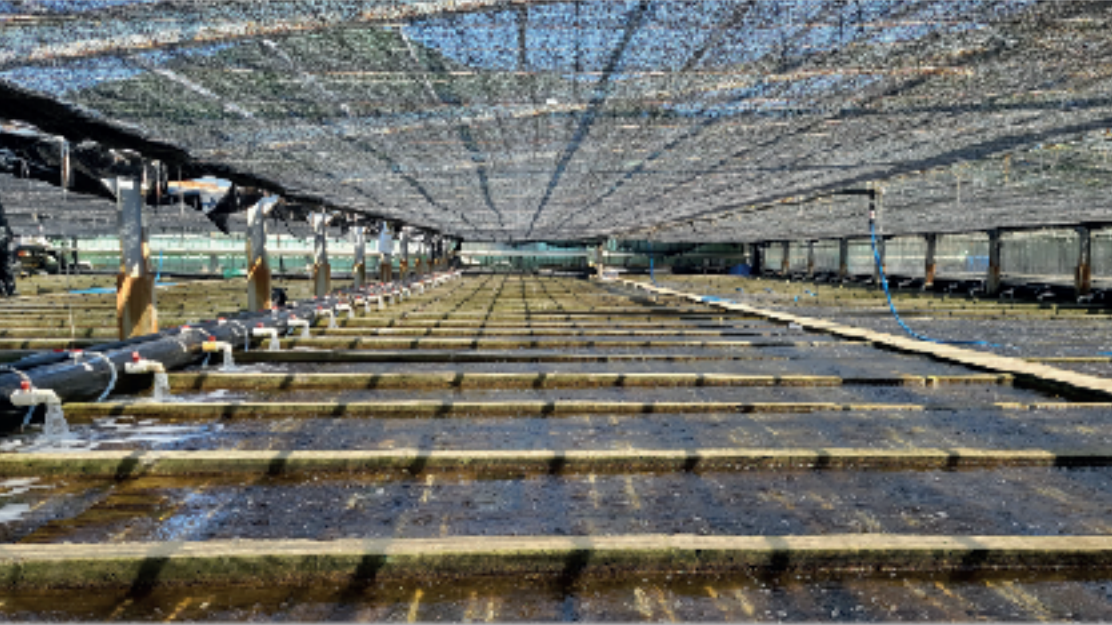
MariCare-applied work site



Applied case for the fire-fighting boat, Masan



Applied case for fish farming cage nets in Haewoo Fishery, Namhae



Applied case for inland abalone farming concrete tanks, Yeosu



Applied case for inland flatfish farming concrete tanks, Wando