

TECH OFFER

Converting Seafood Sidestreams Into Nutritious Foods



KEY INFORMATION

TECHNOLOGY CATEGORY:

Sustainability - Food Security

Waste Management & Recycling - Food & Agriculture

Waste Management

Foods - Processes

Sustainability - Sustainable Living

Materials - Bio Materials

TECHNOLOGY READINESS LEVEL (TRL): **TRL5**

COUNTRY: **SINGAPORE**

ID NUMBER: **TO174857**

OVERVIEW

Asia accounts for approximately 70% of the world's seafood consumption, around 69.6 million metric tons. This is more than twice the total amount consumed by the rest of the world.* Commercially, about 30% of the seafood is not consumed, from bones to offals, to skin/shell/scales. These food loss and waste potentially impose environmental and socioeconomic issues.

The technology provider has developed a green chemical process converting seafood sidestreams into food products that are not only high value but also nutritious, addressing Singapore's demand to increase production of nutrient dense foods. In addition, this method is efficient and cost effective as it requires basic equipment.

The technology provider is looking for R&D collaborators and for test-bedding especially with industries who are producing aquaculture food with high nutritional value and interested to utilise their sidestreams more sustainably.

* FAO 2018

TECHNOLOGY FEATURES & SPECIFICATIONS

The technology covers waste valorization, food technology, converting them into sustainable high value food. Some key features of the technology are as follows:

- Low cost production
- Rich in nutrition which is comparable to commercial high value food
- Tunable textures and properties
- Simple processes and equipment needed
- Product is thermally stable

POTENTIAL APPLICATIONS

- Foods (e.g. collagen rich foods, protein rich products)
- Supplements to provide amino acids

UNIQUE VALUE PROPOSITION

- Customizable solutions achieving high value and nutritious foods with good thermal stability
- Extremely high yield (>80%)
- Environmentally sustainable food production through food sidestream valorization
- Low energy and low cost of production using simple processing methods
- Scalable process