

## CIFT develops solution to process waste

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**Kochi:** With shrimp farming on the rise in many states, there is growing interest among farmers and businesses to maximize the value of shrimp waste, a byproduct, into high-value products. Following industry demand, scientists at Central Institute of Fisheries Technology (CIFT) developed a solution, thus helping set up India's first shrimp shell biorefinery to extract proteins, chitin, chitosan and minerals.

CIFT officials stated that this initiative addresses the pressing issues of shrimp processing waste while setting a benchmark for sustainable industrial practices in the fisheries sector. "We ha-

### **SHRIMP WASTE**

ve shell and shrimp head as waste from shrimp farms. As of now, only chitin is being extracted from shell waste, with one tonne of shrimp waste yielding 30kg of chitin. Now, we developed an enzyme-based technology from which we are able to

extract 72% value products from the total waste. The protein extract is three-fold higher. We are able to extract 80% of proteins from the dry waste," said Elavarasan K, lead scientist of the project.

The team, led by fish processing division head Bindu J, along with Renuka V, Jeyakumari A and Tejpal CS, conducted pilot-scale trials, optimized processes and facilitated networking with stakeholders, including MPEDA and chitin manufacturers. The shrimp shell biorefinery technology not only reduces environmental

impact but also produces valuable products such as chitin, chitosan and shrimp protein hydrolysate. These products are in high demand across industries, including agriculture, pharmaceuticals and cosmetics.

The research for the solution came from the demand by a young entrepreneur from Maharashtra, Amey Naik, who approached CIFT seeking a solution. CIFT has now transferred the technology to Naik's Longshore Technologies Pvt Ltd, which processes two tonnes of shrimp waste daily.