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Jellyfish Processing and Proximate Analysis: Utilization of Underexploited Marine Resource

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India was one of the countries that produced more than 1,000,000 tonnes of jellyfish during the last decades. There are a few scattered reports on jellyfish fisheries and economics in Indian waters. The present study aimed to compare and evaluate the potential of two species commercially significant edible jellyfish species (*Lychnorhiza malayensis* and *Crambionella annandalei*) as nutritional and functional food ingredients. Conventional methods, such as salt curing and drying, are compared with contemporary approaches involving refrigeration, freeze-drying, and the use of preservatives. The proximate analysis reveals jellyfish's high protein and low-fat content, making it a nutritious addition to the human diet. Additionally, bioactive compounds, particularly collagen, underscores its potential in pharmaceutical and cosmetic industries. The study also highlights recent innovations in automation and biotechnology that promise to improve processing efficiency and product safety.

The specimens were collected from the Mudasalodai fish landing center, South Coast of India. The selected species were processed by exposing them to varying amounts of alum and crystal salt for 22 days and by the dehydrating method. *Lychnorhiza malayensis* possessed negligible fat contents of 0.26g/100g while, protein was 24.28g/100g, 52.89g/100g of ash and moisture content of 24.61g/100g *Crambionella annandalei* possessed 0.7g/100g of fat while, 7.11g/100g of protein, 62.93g/100g of ash and 61.85g/100g of moisture. The protein and moisture content showed an equal ratio in the jellyfish. Also, the salt-dried crude extracts of *Lychnorhiza malayensis* and *Crambionella annandalei* showed no hemolytic activity. While it may not be a source of protein, jellyfish can still provide essential nutrients and minerals in a low-fat package.



Figure 1. *Crambionella annandalei*

Figure 2. *Lychnorhiza malayensis*

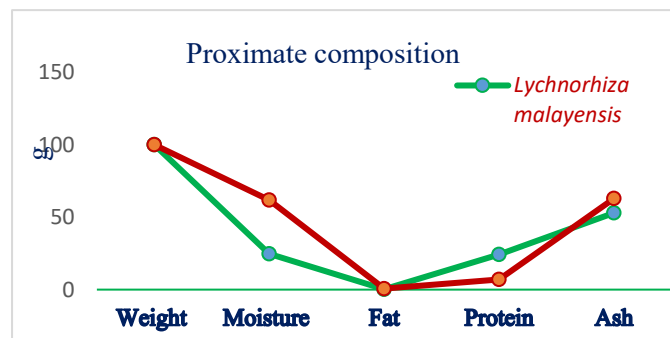


Figure 3. Graphical representation of the proximate composition from the salt dried (salt and alum) *Lychnorhiza malayensis* and *Crambionella*