

CASE STUDY 10 – IMPROVED NUTRITIONAL VALUE OF BLACK TIGER SHRIMP, PENAEUS MONODON - MALAYSIA



Challenge:

- Improving phytonutrients in the meat of Penaeus Monodon
- Understanding quantitative improvement of functional phytonutrients (Beta-Carotene and Vitamin E) nutritional value of Penaeus Monodon DOC 120 days of treated pond vs DOC 123 days of control pond
- Understanding the nutrient result of premium feed against normal feed + coated oil.

JF Nutritech Solution: Engineered solutions to maximize value and efficiency for customer's asset.

- Perfat Ruby 2500 is proposed as a solution to improve phytonutrient content in Penaeus Monodon
- Control shrimp fed with premium feed vs treated shrimp fed with Perfat Ruby 2500 is tested and considered

Results (DOC 120)

- 3rd party test confirms that phytonutrient concentration can be improved in black tiger shrimp, Penaeus Monodon
- Perfat Ruby improved Beta Carotene (pro Vitamin A) concentration by 293% in treated shrimp
- Perfat Ruby improved Vitamin E concentration mainly on tocotrienol by 52% in treated shrimp



Alpha Testing Labs (SA0375373P)

Certificate of Analysis

Sample	Test Parameter	Test Method	Unit	Result
Control				
1	Beta Carotene	HPLC	ppm	0.15
2	Vitamin E (tocotrienol)	HPLC	ppm	2.5
Treated with Perfat Ruby 2500				
1	Beta Carotene	HPLC	ppm	0.59
2	Vitamin E (tocotrienol)	HPLC	ppm	3.8

Improvement of Beta-Carotene (pro Vitamin A) by ~293%, Improvement of Vitamin E (tocotrienol) by ~52%

**Improved nutritional value, healthier shrimp, healthier food.
Marketability for customer**