

THE EFFECT OF FISH ANALOG DIET ON BELUGA WHALE (*DELPHINAPTERUS LEUCAS*) HEALTH AND BODY CONDITION

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Abstract

In zoos and aquariums the staple diet for marine mammals is freshly thawed, previously frozen fish and squid. Feeding a variety of fish to captive piscivores can be a major challenge to institutions, due to cost and availability thereby making a readily available prepared fish analog-based diet very appealing. Past studies feeding the Mazuri[®] fish analog product (PMI Intl, St. Louis, MO) to California sea lions and penguins have shown good acceptance of this product with no adverse effects, while increased rate of passage was observed when this product was exclusively fed to bottlenose dolphins. Our study examines the effect of feeding 10 - 50% Mazuri[®] fish analog diet on beluga whale health.

Mystic Aquarium currently houses three adult beluga whales whose health status is monitored closely via physical examinations, dietary records, blood collection, gastric sampling, girth measurements and blubber thickness. During this seven month study each animal was used as its own control and all variables were compared during the feeding trial to pre- and post- study baseline values using repeated measures ANOVA. Animal behavior was monitored daily while blood samples were collected twice monthly for hematological analysis. Other parameters were measured on a monthly basis. All animals accepted the product immediately with no training required. Preliminary data indicate that the feeding of this product does not adversely affect animal health and that this product is an appropriate addition to beluga whale diets at the tested percentages.