

MUCOPRO



MUCOPRO: FULL OF FREE AMINO ACIDS AND PEPTIDES

MucoPro is Sonac's new natural protein. It is concentrated hydrolyzed porcine mucosal tissue. In dedicated European slaughterhouses the mucosal tissue of pig intestines is separated from the outer lining. Through enzymatic hydrolysis, pharmaceutical heparin is produced from this mucosa. The hydrolyzed mucosa is processed in order to remove fat and insoluble parts. Subsequently, the product is desalinated (a proprietary process), gently concentrated and finally spray dried (powder) to create an usable and storable product.

Natural Ingredients. Smart Solutions.

sonac

DARLING
INGREDIENTS

VIRAL AND BSE SAFETY

The product is safe with regard to viruses, as the various production steps (hydrolysis and evaporation) in the process of MucoPro are effective and well documented virus reduction steps. Periodical screening using PCR techniques is applied to validate for absence of ruminant protein.

DIGESTIBILITY

80% of the protein fraction is smaller than 500 Da. Literature explains the digestive system can directly assimilate amino acids and small peptides of this size, without need for prior digestion. In N retention trials with piglets a digestibility of 100% has been determined (higher than reference protein caseine).

THE ADVANTAGES OF MUCOPRO

Since it is a predigested source of protein, MucoPro has many benefits in aqua feeds:

- very palatable animal protein
- attractant in shrimp and juveniles diets
- high content of free amino acids, di-, tri- and tetra-peptides
- highly digestible
- reinforces the gut defensive system
- water soluble
- hypo allergenic
- small particle size distribution

SOME GROWTH TRIALS WITH MUCOPRO

Utilisation of MucoPro as replacement of LT fish meal for trout larvae (0,2 g)

	Reference	MucoPro2.5	MucoPro5
Initial weight (g)	0,19	0,19	0,19
Final weight (g)	7,73	7,70	8,14
Initial total biomass (g/tank)	15,2	15,2	15,2
Final biomass (g/tank)	618	615	649
FCR	0,59	0,58	0,58

SONAC is a leading manufacturer of reliable ingredients of animal origin. With an active R&D program, reliable processes and sustainable end products Sonac continuously adjusts to market needs. A good geographical spread of locations and a broad portfolio of fats, proteins, minerals and specialties make Sonac a trusted partner for many international producers in food, pet food, feed and fertilizers, worldwide. Sonac is part of Darling Ingredients International.

For more information about this specialty product please contact us:

PO Box 9 NL 5690 AA Son +31 (0)499 364 800 info@sonac.biz

sonac.biz

Utilisation of MucoPro as replacement of fish meal for trout juveniles (60 g)

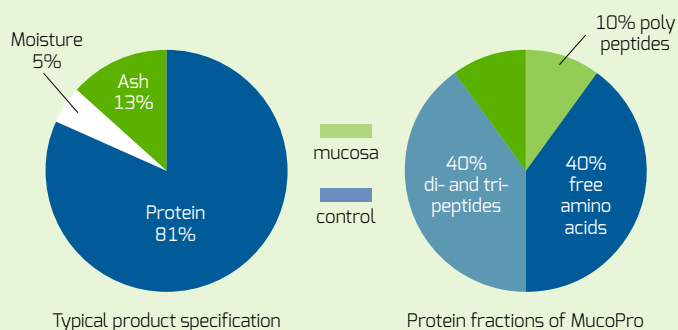
	Reference	MucoPro2	MucoPro4	MucoPro6
Initial weight (g)	61,4	62,2	60,3	59,9
Final weight (g)	170,0	171,8	167,7	168,3
Weight gain (g)	108,6	109,6	107,4	108,4
Weight gain (%)	276,9	276,2	278,1	281,0
FCR	0,82	0,81	0,81	0,81

Utilisation of MucoPro as replacement of hydrolyzed fish proteins or fish meal for shrimp juveniles (0,5 g)

	Reference	MucoPro 2%	MucoPro 5%	CPSP 2%
Initial avg weight (g)	0,53	0,55	0,56	0,56
Final avg weight (g)	6,52	6,71	6,51	6,68
Weight increase (g)	5,99	6,16	5,95	6,12
Avg growth (g/week)	0,67	0,68	0,66	0,68
Initial weight total	95	99	76	75
Final weight total	1114	1174	821	821
FCR	1,14	1,19	1,19	1,17

CONCLUSION

The replacement of 5% LT fishmeal by MucoPro has a positive effect on growth of trout larvae. A similar effect is observed when MucoPro is included in diets for shrimp juveniles. MucoPro is a valuable alternative for fish meal in diets for trout and shrimp. Recommend dosage of MucoPro powder in trout & shrimp feeds: up to 5-6% of the diet.



sonac