

Amino Acid Content (% total DM)

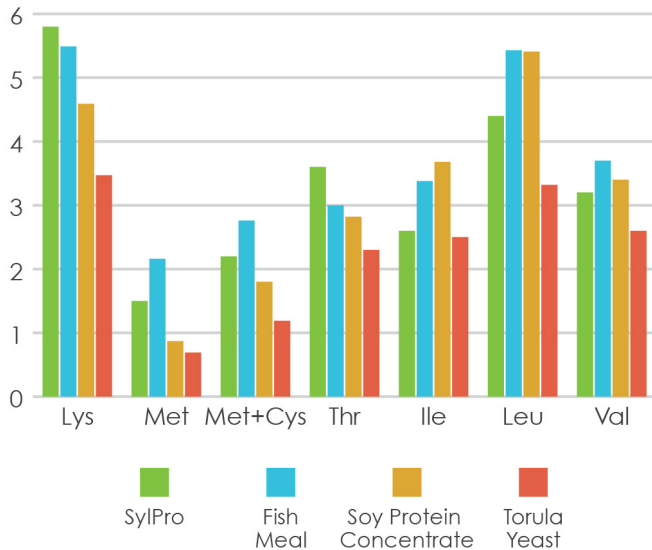


Figure 1. Comparison of target amino acid profile of SylPro® with other protein concentrates on a total dry matter basis. Digestible amino acid content will be available for salmon, hybrid striped bass, and weanling pigs.



DIAAS

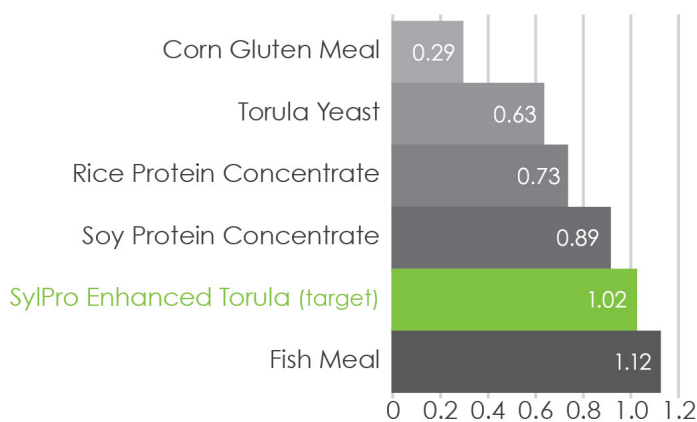


Figure 2. Digestible indispensable amino acid score (DIAAS) of common high protein feedstuffs. SylPro® Enhanced Torula target value based on 92% digestibility.

SylPro® Enhanced Torula

SylPro® Enhanced Torula yeast is a high-protein feed ingredient (>60% CP) derived from forestry by-products for use in animal feed formulations.

Arbiom's proprietary wood-to-food technology integrates bio-conversion and fermentation to produce a high-protein ingredient (SylPro®) from wood. SylPro® is a natural, economical, traceable, and sustainable protein source for feed and food applications.

SylPro® Enhanced Torula yeast has an enhanced amino acid profile and digestibility over traditional fermentation products. The limiting amino acids in animal production are generally lysine, methionine, and threonine, in some order depending on species. SylPro® is a great source of all three of these key amino acids compared with other protein concentrates (Figure 1). SylPro® is also a good source of beta glucans.

Using digestible indispensable amino acid score (DIAAS) as a measure of protein quality, SylPro® surpasses soy protein concentrate in quality and is comparable to fish meal (Figure 2). SylPro® Also provides additional benefits as a consistent high quality protein ingredients that is free from biohazard risk and is available at a stable price. All without the biohazard risk and lot-to-lot variability that hamper the use of fish meal and other animal proteins in feed formulations.

SylPro® Composition (target)

Crude Protein (Min.)	60%
Crude Fat (Max.)	5%
Crude Fiber (Max.)	2%
Ash (Max.)	7%
Moisture (Max.)	7%
Ca (Min.)	*
P (Min.)	TBD

*Not a significant source
TBD, To be determined

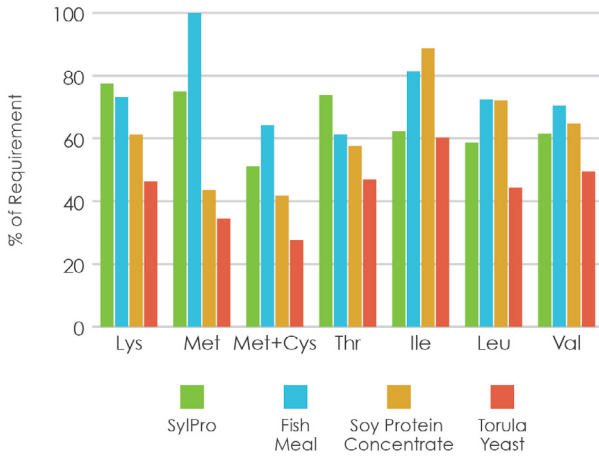
PRODUCT SAMPLES AVAILABLE

EU Contact: Amelie Drouault
adrouault@arbiom.com

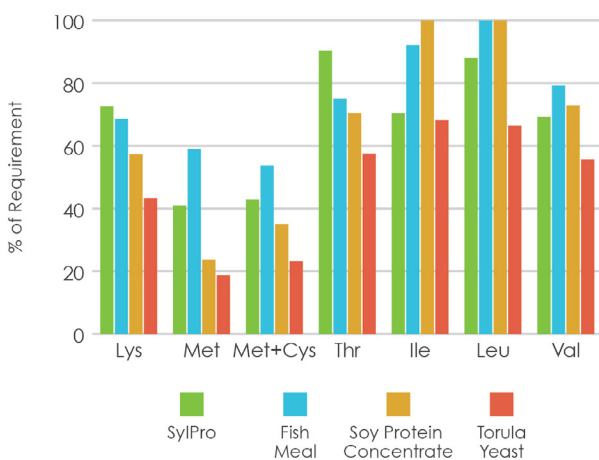
US Contact: Emily Glenn
eglenn@arbiom.com



Percent of Weanling Pig Amino Acid Requirements with 20% Inclusion



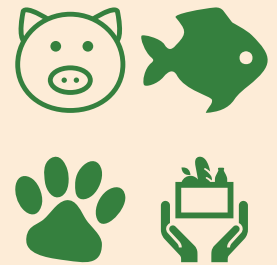
Percent of Salmon Amino Acid Requirements with 30% Inclusion



SylPro® Enhanced Torula consists of approximately 500 micron (No. 35 mesh) particles and is suitable for extrusion applications.

SylPro® Enhanced Torula yeast fits current AAFCO, CFIA, and EU feed ingredient definitions for Torula yeast.

SylPro® Enhanced Torula will be verified for use in salmon, tilapia, rainbow trout, hybrid striped bass, suckling-weanling pig, and companion animal feeds. SylPro® product samples will be available in the second half of 2018.



About Arbiom

Arbiom has developed an integrated processing and fermentation solution to convert lignocellulosic material (wood) into single-cell protein (SCP) for food and feed applications.

