



A RICH SOURCE OF PROTEIN

ecoMass[®] ANALYSIS VALUES

Raw Protein	52,0%
Dry Matter	94,0%
Raw Ash	9,0%
Raw Fat	1,1%
Density	0,5/cm ³
ME (cattle)	3162 kcal/kg
NE-L	1846 kcal/kg
NE-G	1944 kcal/kg
TDN	82,0%
RDP	41,74 g/100g
RUP	10,26 g/100g



Sodium(Na)	0,68%
Starch	9,0%
Raw Cellulose	4,60%
Total Sugar	2,55%
NDF	18,45%
ADF	5,87%
Lignin	1,27%
Total Phosphor	0,47%
Magnesium (Mg)	0,29%
Potassium (K)	1.01%

ONE AND ONLY PROTEIN FEED RAW MATERIAL IN TÜRKİYE



52% and 55%
raw protein
types
available!

Head Office: Gayrettepe Mah. Prof. Dr. Bülent Tarcan Cad. Engin Pak İş Merkezi No.5 Kat 6, Beşiktaş, İstanbul, Phone: 0212 217 17 48

Factory: Köseköy Mah. Ankara Cad. No.275, Kartepe, Kocaeli, Phone: 0262 373 65 71

One and only
protein feed
raw material
in Türkiye

52% and 55%
raw protein
types
available!

ecoMass® is a complex of protein hydrolysates and bioactive ingredients produced by structural transformation of cell proteins of yeast by high and simple nitrate compounds.



GMP + FSA Assured

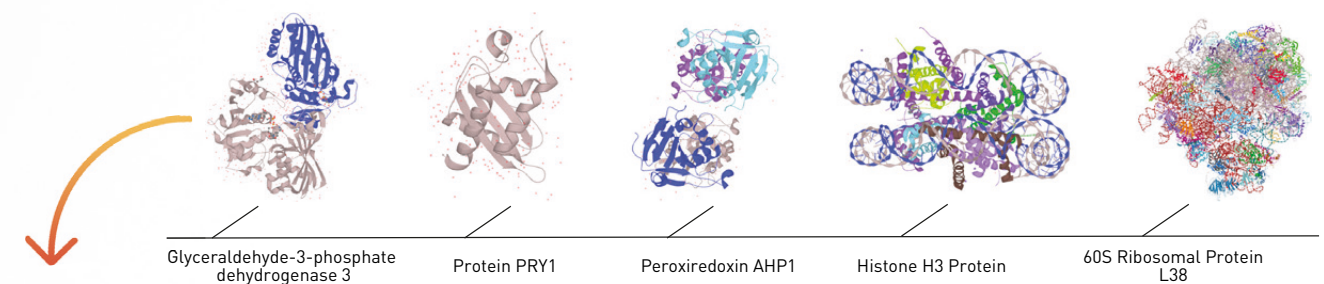
Manufactured at our factory whose quality management system is certified for
ISO 9001, ISO 14001, ISO 45001, ISO 22000 and HACCP standards.

The patented process of Integro Gida is used for production.

1

Process Inputs = 691 peptides and polypeptides

In the patented process of Integra Gida, the metabolites released into the environment during yeast fermentation (1), nitrogenous compounds (2) and rapidly digestible carbohydrates (3) are subjected to further processing and undergo various reactions. The compounds that make up the main body of the 691 peptides and polypeptides being subject to these reactions are shown below:



2

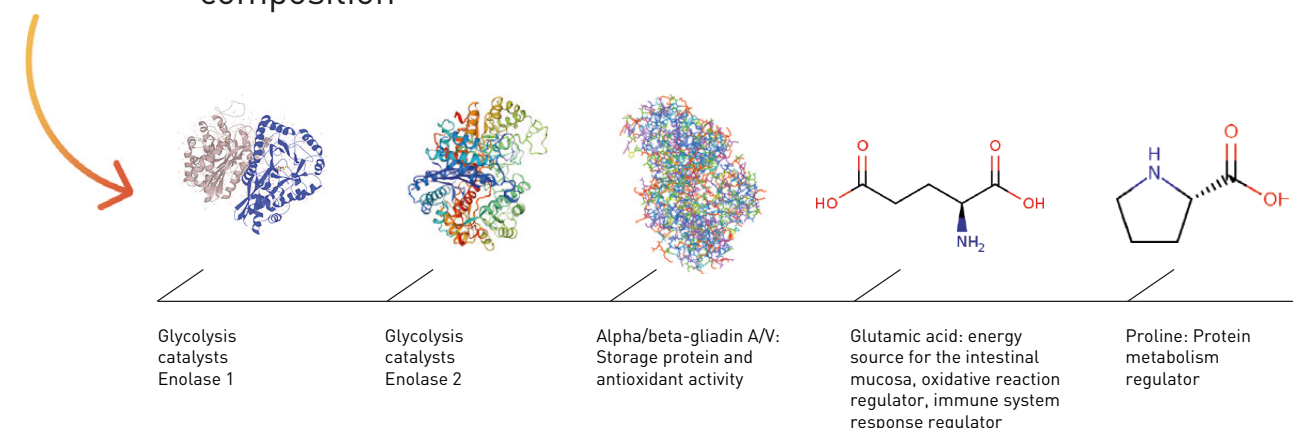
Process

- Molecular interactions and reactions
- Denaturation
- Depolymerization
- Aggregation
- Removal of impurities
- Simplification in peptide composition

3

Process outputs = 254 peptides

A peptide composition is newly formed or it's purity is improved at the end of the process, which can be used by rumen microorganisms with maximum efficiency.



ecoMass® is a raw material that improves the structure of protein by using a patented production process and turns it into a highly bioavailable structural protein

RESULTS – Selected Proteins

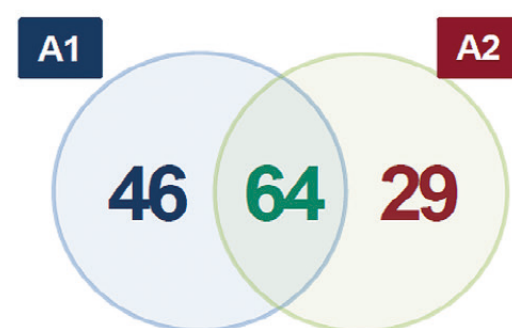
FAU
FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG

A1 8 Different species
110 Proteins
430 peptide sequences

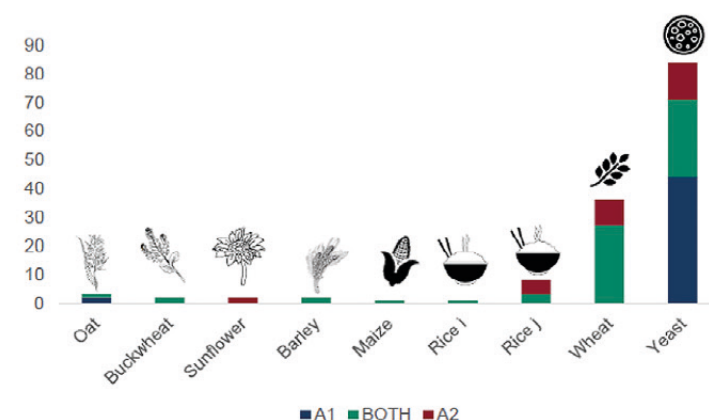
A2 9 Different species
93 Proteins
377 peptide sequences

Green plants: 39 proteins
Yeast: 71 proteins

Green plants: 53 proteins
Yeast: 40 proteins



Total: 139 Proteins



A1: Final product ecoMass® developed by using the patented process of Integro.

A2: Non-processed ecoMass® in wet state, the first input of the production process.

The graphic given above shows the nitrate compounds used as the first input in **A2** passes through the patented process of Integro to bind to cell proteins of yeast and plant proteins and to ensure **ecoMass®** to turn into a structural protein.

As the graphic shows, **65% and 35% of ecoMass® is yeast protein and plant protein respectively.**



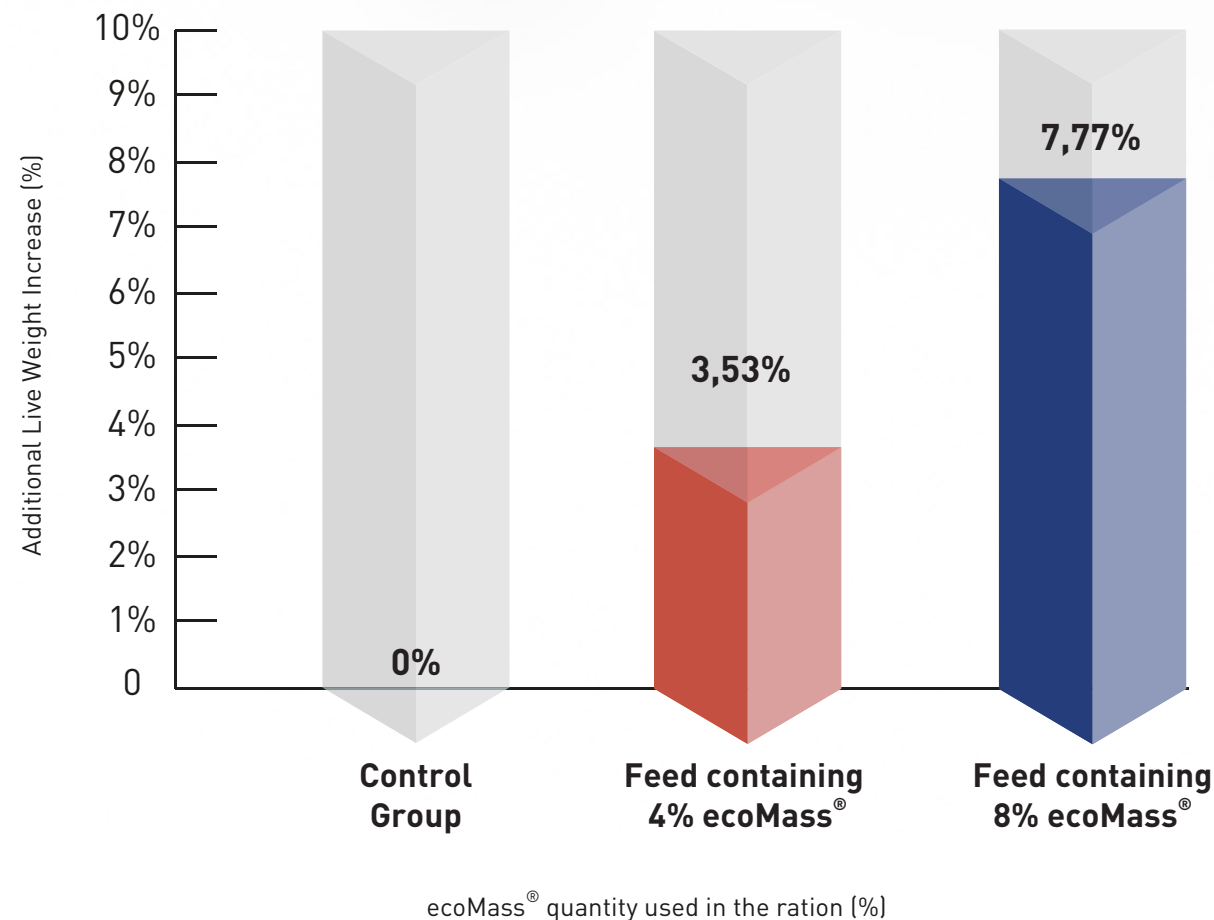


Productivity and Saving Together

ecoMass® is an excellent source of protein, feed containing ecoMass® is easily digested by animals, protects their health and increases their productivity.

Farms using feed produced with ecoMass® enjoys notable increase of productivity.*

Live weight increase enabled by ecoMass® supplemented cattle feed compared to ordinary feeds.



- It is a protein feed raw material with high bioefficacy. Feed containing ecoMass® is more usefully digested by livestock.
- It is tasty and appetizing, increasing the dry matter intake.
- It is an excellent source of protein, 52% and 55% raw protein types are available.
- It saves on ration costs.
- Its price is lower than imported protein sources.
- It is recommended for use as a raw material in blended feeds for ruminants up to 8%
- It is an industrial raw material produced throughout the year, so that feed factories do not have to stock it.
- The binding function of its pellets prevents powdering.
- Shelf life:** 24 months (suitable for feed factories having storage facilities)
- Weight and packaging:** 50 kg sack, big bag or bulk

It has been determined that the blood urea levels known to have a negative impact on reproductivity parameters **in dairy cattle are lower in the cattle fed with ecoMass® - containing feed as compared to ordinary feed.**

This is considered as **another indicator of the high protein bioavailability of ecoMass®.**

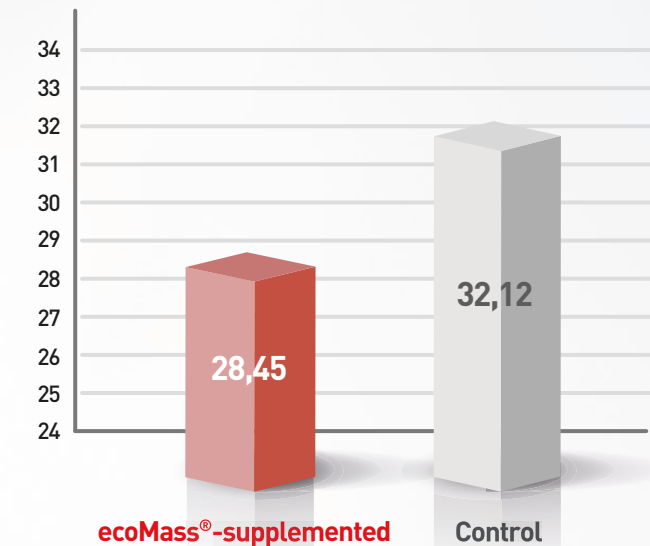
Blood urea (mg/dL)

ecoMass®-supplemented

28,45

Control

32,12



Control groups: Blood urea level of cattle fed with find ordinary feed: 32.12
Blood urea level of cattle fed with feed containing ecoMass®: 28.45

**Study of possibilities to use dried yeast remnants (ecoMass®) as animal feed*