WHY IS RUMEN PROTECTED LYSINE NEEDED?

- Methionine and Lysine work in concert; both amino acids are necessary in diets for the most flexible and precise formulation. It results in maximum production performance without overfeeding.
- The heat applied to concentrates during the manufacturing process and poor fermentations in ensiled forages, decrease Lysine concentration and its availability due to the Maillard reaction.

WHAT ARE LYSINE’S SPECIFIC ROLES IN RUMINANT NUTRITION?

- Improves R.O.I and net income in field conditions.
- Improves Milk production and Milk protein synthesis.
- Increases Milk casein production maximizing the Dairy Industry profitability enhancing its cheese efficiency (less kilograms of milk needed to produce one kilogram of cheese).
- Improves health status and immunometabolism, clear positive effect during heat stress period and better reproductive performance.
- Supports proper growth, helps to absorb and conserve calcium with a specific role in the collagen formation and connective tissue.
- Is a precursor in the mammary gland for non-essential amino acids.
- Is a precursor of carnitine (the transport vehicle to carry long chain fatty acids into the mitochondria for ß-Oxidation).
This special technical protection, and the ideal size and specific gravity of LysiGEM results in an elevated level of rumen escape, providing high intestinal Lysine content ready to be absorbed and available by the animal:

- Specific gravity higher than 1.02 g/cm³ threshold to ensure low rumen retention time
- Particle sizes lower than 2.0 mm ensuring a rapid exit into the abomasum
70% Lysine HCl
55% Lysine*
85% Rumen Escape*
95% Intestinal Availability*
444 g of MP Lysine/kg of product*  
*Based on LysiGEM Matrix Values, independent from any label, spec sheet and/or COA claim.

**GOLDEN RULE**

Lysine is an essential nutrient for ruminant formulation. Therefore, we must cover Lysine requirements in different stages and depending on different dietary feed ingredients. Please contact Kemin for more tailored information.

**AVERAGE INCLUSION RANGE IN STANDARD DIETS**

Mix carefully in complete feed.

- **DAIRY COW**
  10-50 g per head per day
- **BEEF CATTLE**
  14-25 g per head per day
- **SMALL RUMINANTS**
  5-10 g per head

Stored in a cool and dry place (0-30°C) in the original package. Stable for 18 months. Keep bag closed when not in use.
WHY SHOULD IT BE LysiGEM?

Kemin’s **three-step** evaluation **process** validates the effectiveness of LysiGEM effectiveness and superiority offering the best in class Rumen Protected Lysine and **technical service** to the market.

Kemin’s Ruminant In Vitro Release Model studies the behavior of the different rumen protected lysine supplements simulating all gastric phases, showing LysiGEM’s superiority and stability compared with main competitors.

LysiGEM combines a high rumen protection rate and intestinal availability, resulting in the highest metabolizable Lysine content for ruminant formulation, measured under *in vivo* conditions in the most prestigious research centers.

Throughout countless field, academic and industry trials, LysiGEM consistently produced the best productive performance results and profitability, enhancing cheese efficiency as well as allowing more accurate ruminant diet formulations.
ARE YOU READY FOR THE NEXT LEVEL IN RUMINANT NUTRITION?

RUMINANT ESSENTIALITIES
by KEMIN

A complete ruminant portfolio scientifically proven, consistently tested under field conditions and supported through our lifelong learning program.

INSPIRING AMINO ACID NUTRITION
KESSENT™
LysiGEM™
LysiPEARL™
MetiPEARL™

LEADING HEALTHY NUTRITION
CholiGEM™
CholiPEARL™
NutriCAB™
KemTRACE™
TOXFIN®

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The KESSENT product range will be available in the EMENA market beginning January 2020.

www.kemin.com/lysigem