

# Blood plasma validation of AjiPro®-L



Blood plasma evaluation confirmed the high level of lysine bioavailability in AjiPro-L, a rumen protected lysine. AjiPro-L offers flexibility in ration formulation and encourages the balancing of amino acids for higher milk production, higher income over feed costs, and reduced nitrogen excretion.

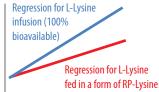
## **BACKGROUND**

A long-term investigation into the use of plasma lysine to quantify the lysine level absorbed from a rumen protected lysine (RP-Lysine) was led by Dr. Charles Schwab, professor emeritus, University of New Hampshire.

Earlier infusion studies indicated that a regression equation could be used to identify the bioavailability of products using "a slope-ratio" technique. Verification, though, required a well-characterized RP-Lysine product.

## SLOPE RED / SLOPE BLUE = RELATIVE BIOAVAILABILITY





L-Lysine dosage (grams infused or fed)

For verification, a wellcharacterized RP-Lysine product is necessary.

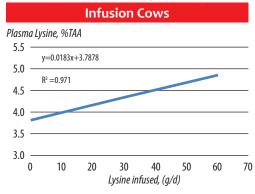
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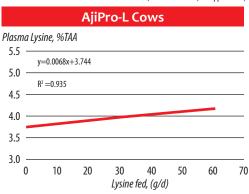


# BIOAVAILABILITY OF AJIPRO-L, FIRST GENERATION, SLOPE-RATIO TECHNIQUE

Plasma Lysine (%TAA on  $\varphi$ m basis)

Whitehouse et al., 2012 JDS Vol. 95, E. suppl. 2: 115)

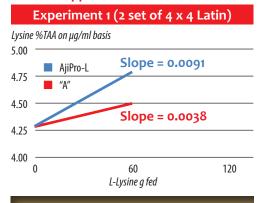




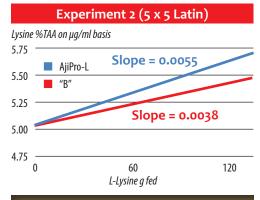
Relative bioavailability: 0.0068 / 0.0183 = 37.2% Close to the AJICO value of 40%

## COMPARATIVE BIOAVAILABILITY OF AJIPRO-L TO OTHER RP-LYSINE PRODUCTS

#### **Practical application**



Relative bioavailability AjiPro-L: A = 1:0.42



Relative bioavailability AjiPro-L: B = 1:0.69



AjiPro-L third generation product is now available. Third gen continues the trend of lowering cost per metabolizable Lysine while maintaining the same high level of protection and consistency Ajinomoto puts behind all of its products.