

## ENDOGENOUS AMINO ACID LEVELS IN POULTRY DIGESTA

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Endogenous amino acid secretion into the digestive tract could represent a considerable loss to birds if these secretions are not efficiently digested and reabsorbed. It is difficult to separate proteins in the digestive tract into those from intestinal secretions, desquamated epithelial cells, and those from the diet. However, composition and secretion of endogenous protein should be considered in studies of protein nutrition and utilisation.

In the present study, estimates of endogenous amino acid composition of ileal digesta were made in growing male broilers (6 weeks old) and roosters (90 weeks old) by feeding a N-free diet and by regression analysis (Bierlorai et al. 1985). Broilers were fed ad libitum and total contents of the lower half of the ileum collected. Roosters had access to diets for 1 hour each day and intestinal contents were collected from a cannula in the terminal ileum (Raharjo and Farrell, 1984). The results are presented below.

Endogenous amino acids (g/kg intake)	Broilers		Roosters	
	N-free diet	Regression analysis	N-free diet	Regression analysis
Aspartic acid	0.49	1.22	1.14	1.82
Threonine	0.45	0.17	0.96	1.19
Serine	0.39	0.49	0.83	0.88
Glutamic acid	0.63	1.45	1.39	1.32
Glycine	0.28	0.89	0.62	1.28
Alanine	0.25	1.08	0.55	0.83
Valine	0.37	0.75	0.80	0.86
Methionine	0.07	0.06	0.12	0.09
Isoleucine	0.39	0.47	0.53	0.37
Leucine	0.49	1.46	0.74	0.96
Tyrosine	0.66	0.59	0.50	0.57
Phenylalanine	0.25	0.63	0.48	0.56
Histidine	0.10	0.32	0.21	0.34
Lysine	0.22	0.51	0.35	0.42
Arginine	0.23	0.52	0.45	0.67
Average	0.31	0.71	0.64	0.81

Endogenous amino acid values determined using a N-free diet were lower than those obtained by linear regression analysis. Further studies are required to determine the most appropriate method of estimating endogenous amino acid secretion.

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