
227 Amino acid digestibility in dairy proteins compared with plant proteins. J. K. Mathai^{*1}, Y. Liu¹,

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An experiment was conducted to determine the standardized ileal digestibility (SID) of AA in whey protein isolate (WPI), whey protein concentrate (WPC), milk protein concentrate (MPC), skim milk powder (SMP), pea protein isolate (PPI), soy protein isolate (SPI), soy flour (SF), and wheat. Nine ileal-cannulated barrows (initial BW: 26.25 ± 1.57 kg) were allotted to a 9 × 9 Latin square design with 9 diets and 9 periods. A N-free diet was formulated to determine basal endogenous losses of AA and CP and to enable the calculation of SID of AA. The remaining diets were formulated with each test ingredient as the sole source of AA, with the exception that wheat was included in a diet that also contained SF to compensate for the low CP in wheat. The AID and SID values were calculated using the difference procedure for the wheat diet. The direct procedure was used for all other ingredients. The SID of Lys was greater ($P < 0.05$) in WPI and SPI than in SF and wheat (Table 227). The SID of Met was greater ($P < 0.05$) in WPI than in SMP, SPI, SF, PPI, and wheat. The SID of Trp was greater ($P < 0.05$) in WPI, WPC, and MPC than in SF, SMP, PPI, and wheat ($P < 0.05$). These data indicate that the SID of AA in most indispensable AA is greater in dairy proteins compared with plant proteins.

Key Words: amino acid digestibility, dairy protein, pigs