

Determination of PDCAAS Method

Protein Digestibility Corrected Amino Acid Scoring (PDCAAS) Method

Reference:

I. Individual Foods

- A. Analyze for proximate composition
 - 1. Total Nitrogen (N)
 - 2. Moisture
 - 3. Fat
 - 4. Total Dietary Fiber (TDF)
- B. Calculate protein by N to protein conversion (N X 6.25)
- C. Analyze for essential amino acid (EAA) profile
- D. Determine amino acid score (uncorrected)

$\frac{\text{mg of EAA in 1g Test Protein}}{\text{*mg of EAA in 1g Reference Protein}} = \text{Uncorrected EAA ratio}$

*Reference protein EAA profile = 1985 FAO/WHO/UNU
2-5 year old requirement pattern

The lowest ratio = Uncorrected EAA score

- E. Analyze for digestibility
- F. Calculate PDCAAS

Lowest uncorrected EAA ratio X % true protein digestibility

Ex: AA score of SUPRO ISP = 1.04
True digestibility = 97%
So $.97 \times 1.04 = 1.0$ PDCAAS

II. Food Mixtures

For food mixtures, the full procedure for individual foods may need to be followed, but when data for the amino acids composition and digestibility of the individual components are well established and only the proportions differ, the protein digestibility corrected amino acid score can be calculated by means of a weighted average procedure.

- 1. Protein Quality Evaluation. Report of a Joint FAO/WHO Expert Consultation. Rome, Italy. Food and Agriculture Organization and World Health Organization. Food and Agriculture Organizations of the United Nations; 1990.