ANALYSIS OF BIOLOGICAL VALUE OF EXPENDABLE DIETS
OF THE SECOND GENERATION

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The presented study analyzes biological value of protein in multi-purpose expendable
diets of the second generation (for breakfasts and lunches, dinners and suppers) with
automatically calculated scores of eight essential amino acids (valine, leucine, isoleucine,
lysine, threonine, tryptophan, methionine, phenylalanine), and an indicator of the generalized
biological value or (which is the same) an indicator of protein approximation the «ideal».

The performed research revealed that scores of essential amino acids in the diets
under study exceeded 50%. The number of diets with the scores of amino acids is lower than
the indicated level equals less than 3%. It is determined that most of the created expendable
diets of the second generation are characterized by a high level of the generalized biological
value. Four diets, included to various subgroups (for breakfasts, lunches, dinners and suppers)
are characterized by the highest generalized biological value. The index of protein
approximation to the ideal in them equals 90,39…100%. Only three expedient diets for other
breakfasts have the parameters of protein approximation close to the ideal, and equal 58,18%,
62,0 and 68,8% respectively. We can explain the obtained results by rather low scores of such
essential amino acids as methionine, threonine and lysine.

We performed one of the stages of projecting daily diets as the components of healthy
and dietary nutrition systems – the totality of the expendable diets of the second generation was
«filtered». About 75% of the best diets in terms of the generalized biological value are chosen.
The index of protein approximation to the ideal in them is 85% and more. The choice is made
with the purpose of further application of expendable diets to healthy and dietary nutrition
systems.

Keywords: expendable diets, protein, biological value, essential amino acids.