

MODEL FOR EVALUATION OF A NUTRIENT DATA BASE
Loretta W. Hoover, Ph.D.

Food composition tables have been utilized since the 1890's to estimate the dietary intake of individuals. Initially, data were limited to a few nutritional components in a few foods. As analyses of more nutrients in more foods have been performed, extensive tables of food composition have been compiled. During the past two decades, computer technology has been used to access computer-stored nutrient data bases to estimate the nutritional content of food intake. However, the nutritional values computed by different computerized systems for the same dietary record may vary substantially. Thus, the need to improve the comparability of analyses from various systems has been recognized.

Development of a review model for nutrient analysis systems has been undertaken cooperatively by the University of Missouri-Columbia and the U.S. Department of Agriculture. Several types of errors which might exist in nutrient analysis systems and nutrient data bases were identified. For each type of error, computer processing tasks were developed to diagnose logic and data entry problems. This review model was tested by seven developers of nutrient data base systems.

The review model contains two segments: a questionnaire and five computing tasks accompanied by an interpretation guide. The computing tasks are: 1) update a data base, 2) calculate nutrients for a recipe, 3) report baseline data for 100 gram portions, 4) report nutrients for various portion sizes, and 5) perform dietary record computations. The interpretation guide includes reference data from several USDA data sets. The review model will be published and made available for data base developers wishing to utilize the methodology with their systems.