Summary of Discussions on Session D

Characteristics of Protein Ingredients

J.C. COWAN, Recorder, Bradley University, PO Box 3442, Peoria, IL USA

The question was raised whether dye-binding procedures had been adequately explored for measuring the vegetable protein content of meat products. It has been tried, but no one volunteered information on the extent of its use or effectiveness with vegetable protein. Differential tests for muscle and connective tissue protein could be used for regulatory purposes. One concern (Baltimore Spice Co.) has equipment for sale. It was noted that fluorescence of soy protein products can be useful to detect and quantitate them in meat and other products. This method proposed by Eldridge of Northern Regional Research Center, Peoria, is scheduled for publication in the J. Food Science. It appears to be generally applicable, but may require samples of the original flour to be available if much accuracy is desired.

Considerable discussion arose regarding what items needed to be considered as functionality in soy protein products. Some thought that flavor should not be included and others thought nutrition should not. It was clear that each fabricated product probably had to be considered separately and that in some products all factors of functionality needed to be considered which would include flavor, nutritive value, and color. One observer suggested that functionality needed in any product depends on the system in which it is to be used. You cannot omit any important factor. It was noted that one attempt by the American Association of Cereal Chemists had been made to clarify and standardize methods for testing functionality. A new attempt to develop and refine such procedures is now scheduled for initiation by the Experiment Stations of the Northeastern Region of the U.S.

Although rapeseed protein products rate high in nutritive value, the presence of glucosinolates has not permitted them to be used for human foods. One company in Sweden (Karlshamm) has developed a process for removing the glucosinolates. Tests show that rapeseed protein is very nutritious. The technology is now available to make a commercial product for sale, but the demand for it has not been forthcoming. It may occur, but no commercial rapeseed protein product is currently available for human use.