Express Soy Protein Stability

Iowa State University conducted a shelf life study on soy proteins produced by the Insta-Pro Express technology. Samples of Express meal, soy flour and Textured Soy Protein (TSP) were stored at high temperatures (104, 122, 140 and 158¢ª F) using an accelerated shelf life test.

Extrapolating from the test, the Express proteins showed remarkable stability. In the words of Dr. Lawrence Johnson, the Director of the Center for Crop Utilization, ¡°we are not able to explain the very high oxidation stability that we observed in those samples¡±.

The estimated shelf life of the products based on room temperature (68¢ªF) is as follows:

Express Meal	3.4 years
Express Soy Flour	10.0 years
TSP	1.7 years

Neither panelists nor chemical analysis could detect any lipid oxidation after 259 days of storage at 158¢ªF. The only change that was observed was the color of the products (more yellow than the starting material).

The possible reason for color change could be due to the fact that storing the product at high temperatures resulted into moisture lose that yielded the darker products.

The stability of these products could be due to the presence of natural anti-oxidants and the low moisture content of the Express products.

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