

## Abstract of Presentation

Presentation Title(Should be no more than 20 words):

### **INCREASING THE SOCIAL ACCEPTABILITY OF SOYBEAN-BASED FUNCTIONAL FOODS**

Abstract :

Mainly after the second world war, soybean proteins were recognized as an excellent source of proteins. FAO, USDA and others international agencies and institutions proposed mixtures based on cereals, tubers and oilseed flours, to be used in food programs for developing countries, because of amino acid complementation with cereals proteins and low cost.

However, two problems were associated to the consumption of soy: the beany flavor and flatulence. Bitterness and beany flavors played an important role against consumer acceptability. Several methods were developed to improve flavor (washing of defatted flours, lipoxigenase inactivation before crushing and development of new varieties with low lipoxigenase activity) and to avoid flatulence (water washing and protein isolation).

Soybean production in Argentina started at the beginning of the 1970'. Today there are 20 million Ha of soy crops over 31 million Ha of total land for agriculture.

Respect to soy processing, oil milling industry adopted the solvent extraction process. Screw press is also used alone (producing a soy expeller) or combined with solvent extraction. Nowadays, soy products are from a) Products from solvent extraction oilseed plants, such as defatted soy flour (with different degree of protein denaturation), soy concentrates and isolates; b) Products from oil pressing system: partially defatted flours and grits and textured vegetable protein (TVP) which are used in meat products; c) Products from whole bean, such as full fat flour; soy beverages or special products (like sauces).

Food technologists are using soy in several foods and the social acceptability of soybean-based functional foods is increasing. Sometimes the inclusion of soy is emphasized (like beverages) and sometimes it is included in the formulation as an ingredient. Always soy is used in a quantity that the functionality or the nutritive values of the food are improved but the flavor is not affected.

Several examples of the use of soy in food formulation and development of functional food will be presented.

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