

## Free amino acids obtained from legume flour

The Instituto de la Grasa of CSIC has developed a simple, inexpensive and efficient procedure to obtain free amino acids of nutritional and pharmaceutical interest (especially arginine, homoarginine, canavanine, GABA and L-dopa). These free amino acids can be obtained from legume flours or from the byproducts resulting from the processing of such flours to obtain protein concentrates.

Companies interested in applying the technology under patent license are sought.

### *An offer for patent license*

#### Purified amino acids of nutritional and pharmaceutical interest

The free amino acids can be obtained from the byproducts resulting from the production of vegetable protein concentrates or directly from legume flour. In both cases the raw materials are abundant, easily available and considered edible matrices.

Free amino acids obtained have multiple applications in both food and pharmaceutical industries. They are used as nutritional supplements or as flavorings. Some of them have health promoting properties and it has been suggested their use in the treatment of some diseases. In particular, arginine is related to cardiovascular function, canavanine amino acid is related to some anticancer effect, and the L-Dopa, preferably of plant origin, is administered in the treatment of Parkinson.



Raw materials for free amino acids production

#### Main innovations and advantages

- The proposed procedure of purifying free amino acids is much simpler and cheaper than the fermentation process commonly used.
- The cost of the reagents is very low, at the same time consumables, resin and nano-membranes are cheap and reusable.
- The necessary equipment and machinery is the standard one for those companies producing protein concentrates from legume flours.
- The proposed procedure, besides obtaining free amino acids, also provides other enriched fractions in bioactive compounds (hydrolyzed flavonoids, polyphenols, sugars, etc.).

#### Patent Status

Spanish patent granted

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