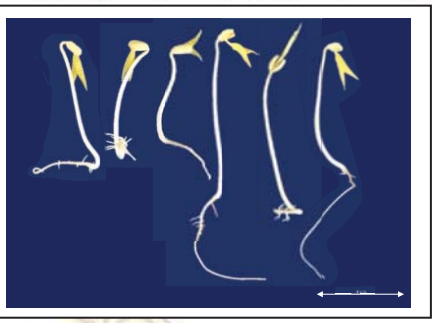
附件一、技術推廣表

利用低溫大氣電漿生產高 GABA 含量之綠豆芽



發明人： **丁俞文** 助理教授
單　位： 國立臺灣大學　食品科技研究所
簡　歷： (可列出相關連結，例如系所、研究室網頁)
https://www.fst.ntu.edu.tw/zh_tw/Facultymembers/Full_time/%E4%B8%81-%E4%BF%9E%E6%96%87-11215109

市場及需求:

機能性素材之開發是健康食品研發的一個重點。GABA 是一種眾所熟知的機能性成分，已被證實能夠抑制人體中樞神經系統神經傳導，具有鎮定精神、改善學習能力、降低血壓、安神助眠，以及舒緩更年期不適等生理功能。市售的 GABA 產品大多來自化學合成或微生物發酵生成，形態以膠囊為主，望之不似天然食品，其食用便利性及對消費者之吸引力都有待加強，生產高 GABA 含量的純天然蔬果汁，除了改善上述缺點，更可促進消費者之營養均衡。精力湯的市場需求逐年提升，很多民眾都會自製蔬果汁（包括精力湯、生機飲料等），但常在原料選取或處理上遭遇困難、感覺時間不夠分配，或者甚至有食品安全方面的顧慮，本案高 GABA 含量純天然蔬果汁產品之推出正是時候。

技術摘要:

以低溫大氣電漿處理促進高 GABA 綠豆芽之生產，以此綠豆芽為主原料製作高 GABA 含量之天然蔬果汁，改善本土機能性素材短缺之問題並回應消費者之健康需求。

優勢:

目前市面上生產 GABA 的方法有：化學合成、微生物發酵生成及植物生合成這三種。前兩種方法各有不小的缺點，如溶劑及雜菌毒素之殘留，都會造成食品安全及健康之疑慮。由於上述化學合成及微生物發酵之明顯缺點，近年以植物生合成生產 GABA 漸漸受到重視，惟此方法雖無明顯副作用，但產量偏低，因而成本過高，影響市場競爭力。本實驗室近來開發成功在合理成本下產出高 GABA 含量綠豆芽的方法，以此榨汁作為主原料製造天然高 GABA 之蔬果汁，恰可補足成本過高之缺點。

競爭產品: 1.《三多》好舒寧®Plus 複方植物性膠囊 2. 大醫生技麩胺酸發酵物(含 GAB 果 A)放輕鬆加強版 3.佳葉龍茶

專利簡述:

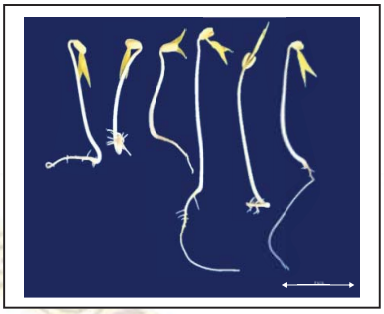
(1)本技術已和工研院合作開發低溫大氣電漿設備，且研究團隊也都有和各領域專業人員進行交流。

聯絡方式: 臺大產學合作總中心，Tel: 02-3366-9945，E-mail: ntuciac@ntu.edu.tw

Utilizing atmospheric cold plasma to produce mung bean sprouts with High-GABA content

PI： Prof. Yu-Wen Ting

Department of Institute of Food Science and Technology, National Taiwan University.



Experience:

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Market Needs:

The development of new functional materials is an important of health food research and development. GABA is a well-known functional component that has been proven to be a substance that can inhibit nerve conduction in the human central nervous system. It has the ability to calm nerves, improve learning ability, it lowers blood pressure, calms the mind and helps sleep, and relieves the physiological functions of menopause discomfort. The commercially available GABA products are mainly capsules, but their convenience and tasty need to be strengthened. If they can be made into living vegetable juices with high GABA content, in addition to improving the disadvantages, they also have nutritional balance. Moreover, the market demand for living vegetable juice has increased year by year. Most people will make their own living vegetable juices, but they often cause health hazards due to improper processing of raw materials. In addition to avoiding food poisoning doubts, this vegetable juice can also increase the added value of product nutrition and other values.

Our Technology:

Atmospheric cold plasma treatment is used to promote the production of high-GABA mung bean sprouts, and to produce high-GABA mung bean sprouts of living vegetable juice to improve the shortage of local functional materials.

Strength:

There are three methods for producing GABA on the market, namely: chemical synthesis, microbial fermentation and plant biosynthesis. Both of the first two production methods have considerable shortcomings, such as residues of solvents and bacterial toxins, which can cause food safety and health concerns. Due to the obvious shortcomings of chemical synthesis and microbial fermentation, the method of producing GABA by plant biosynthesis has gradually been paid attention in recent years.

Competing Products:

1."San Duo" Hao Shu Ning® Plus compound plant-based capsules 2. The doctor's technique of glutamic acid fermented product 3. GABA Tea

Intellectual Properties:

This technology has cooperated with the ITRI to develop atmospheric cold plasma equipment, and the research team has also communicated with professionals in various fields.

Contact:

Center for Industry-Academia Cooperation, NTU E-mail: ntuciac@ntu.edu.tw