

An-Dori

1. Developing Staff Members : An-Dori

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Department	Name	Position
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3. Development Idea

Adzuki beans are rich in varieties of precious functional ingredients, but most of the people use them only as raw materials for hot or cold desserts. Although some water extract of Adzuki bean has been regarded as good for health, very few research about their functional ingredients or health food has been carried out. It is a pity. Therefore, this project is aimed to develop a new type of adzuki beans health food.

4. Technological Competition and

Industrial Application

This technique of making An-Dori is conducted by using Adzuki beans from Pingtung as material, and try to increase their total phenolic content, total free amino acids and SOD-like activity through biochemical transformation and drying. The individual type of phenolic compounds and amino acids, especially BCAA, were further analyzed

by HPLC to confirmed their effect on nutritional enhancement. Hopefully, the high phytochemicals and SOD-like activity may be served as the nutrient supplement and enhance the physical strength especially for aged people. As mentioned, the water extract has been regarded as a miracle in the functional beverage, for their high production value (200 million for 8 million can) in 2015. Our product (An-Dori) with higher phytochemicals and being more convenient to carry, is quite competitive.

5. Merchandise Statement of Achievement

The An-Dori commercial product improved the bioactive substances and antioxidant capacity of Adzuki bean. Among them, polyphenols exhibited the antioxidant capacity, GABA and BCAA in amino acids may improve the sleeping quality and body strength, and SOD-like activity can effectively relieve the fatigue. Therefore, this commercial product from Adzuki bean may possess high amount of antioxidant substances and amino acid components and improve health condition. Compared with the Adzuki bean aquatic beverage in 2015, our capsule products are more concentrated in nutrients, lighter and easier to carry or storage. In the future, they can be further made into different forms of health products to adapt to different consumer groups, and their market development potential can be

expected.



Fig 1 : Powder from Adzuki bean processing.



Fig 2 : Adzuki beans product - An-Dori.

Antioxidant activity	Adzuki bean	Biotransformation
SOD-like (U/g)	4816	8406
Total phenolic (mg/100g)	1780	4610
Total amino acid(mg/100g)	10842	25931

Fig 3 : After the raw materials were biotransformed, the SOD-like activity, antioxidant components, and total free amino acids of Adzuki beans were significantly improved.