

## Case Study

# Crude extract preparation from plant materials



### Customer: Kasetsart University, Faculty of Agro-Industry, Thailand

The Department of Product Development was established in the Faculty of Agro-Industry in 1980, in line with the government's policy of upgrading agro-industries. A Bachelor's degree in Agro-Industrial Product Development was first approved in 1984. The Product Development programs focus on product innovation, technology innovation, process development, quality assurance, marketing and business management. Organization function: Teaching and research. Scope of the research: Product development

### Application: Crude extract preparation from plant materials

Preparation of plant extracts for antioxidant activity in food and non-food products.

### Equipment: Rotavapor® R-200 and Rotavapor® R-3

Ground fresh plant sample was mixed with 95% ethanol (300 ml) in the dark at 25°C for 4.5 h and shaken during the extraction time to ensure complete extraction. The extracts were filtered through Whatman No. 4 paper and centrifuged (15 min, 1500g). Ethanol was evaporated from the supernatants on a rotary evaporator at 50 mm Hg pressure and 50 °C. The evaporated plant extracts were thick and viscous materials and were kept in air-tight amber bottles after flushing with nitrogen gas for 30 s and stored in freezer at 20 °C until they were analyzed.

### Benefit / Conclusion: Productivity!

The better control of the instrument will provide the high efficiency for evaporation of solvent from the crude extract.

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*"The product is easy to use. The equipment is very useful due to various applications for sample preparation or quality determination."*

Dr. Rungnaphar Pongsawatmanit, Associate Professor, Dept. of Product Development

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