

## Case Study

### Bioactive compounds from various plants



#### Customer: Lifetree Biotech Co. Ltd, Korea

Lifetree is a bio-venture company founded with the goal of researching and developing highly effective, yet safe natural products, functional foods and nutraceuticals from Korean native botanicals. Lifetree has purified an active compound, HD-1, from the tree *Hovenia Dulcis*, which is a well known tree in connection with liver health. Two major dairy companies produce yogurts fortified with HD-1 and promote it for habitual drinkers.

#### Application: Discovery of bioactive compounds from various plants

Lifetree is using the Mini Spray Dryer B-290 to gain dried powder from plant extracts and later on to purify and identify bio-active compounds by various analytical techniques. Once an active compound is identified, Lifetree produces a prototype powder product from the fractions of preparative liquid chromatography in mini-scale for quality control and development of scale-up methods for the main production.

#### Equipment: Mini Spray Dryer B-290

The Mini Spray Dryer B-290 is the instrument of choice to gain powder products from natural plant extracts. With this instrument, developing operational methods for this kind of compounds is a straightforward procedure.

#### Benefit / Conclusion:

The spray dryer enables to gain finer dried powders than free drying or vacuum drying techniques. The methods developed for small scale production can easily be adapted to industrial scale.

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*“The spray dryer is easy to use for the powder production from natural plant extracts and the production can be scaled-up without great efforts.”*

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