



# Available for Services Freeze Dryer

## LABCONCO

### Model: 12L -84 °C



Chemical Engineering  
Mahidol University

A freeze dryer, also known as a lyophilizer, is a drying process that removes moisture from a sample by freezing and then sublimating the ice directly into vapor without passing through the liquid phase. The process consists of three main stages: freezing, primary drying (sublimation under reduced pressure), and secondary drying (desorption of remaining moisture).

#### Applications :

- Biological Sample Preservation: Used in laboratories to preserve biological samples, such as bacteria, cells, or proteins, for long-term storage.
- Chemical Industry: Applied for drying chemicals or materials that are heat-sensitive and require preservation in a dry state.
- Moisture Loss Analysis
- Stability Studies
- Impact of Drying Process

#### Service fees

| Details      | Students and staff within the university/ institute partners (MOU) | External personnel (government organization) | External personnel (private organization) |
|--------------|--------------------------------------------------------------------|----------------------------------------------|-------------------------------------------|
| Freeze Dryer | 100 THB/Sample                                                     | 150 THB/Sample                               | 200 THB/Sample                            |

#### Contact Info



+66(0)2 889-2138 ext 6145

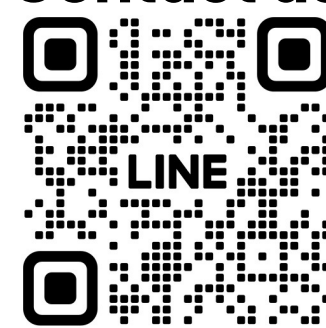


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