



Derived from
Space Technology!

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JAXA startup
TwinCapsula Inc.

From Reentry to Reality: Ultra Cooling Technology for Society

“Ultra” Thermal Insulation Container
BAMBOO SHELLter

Maintains temperature below
-70°C for over 7 days
with only a small amount of dry ice!

Compact
×
**Ultra High
Performance**

Reliable. Cost-effective.

Cold Transport for Samples
& Temperature-Sensitive
Materials.



3 Lineups to Choose From: Size & Performance

Single Insulation

【Small】

Keeps Cold:
3.3+ days

Smallest
Outer Dimensions

1.3 L (outer) / 1.0 L (inner)

【Medium】

Keeps Cold:
4.0+ days

Largest
Internal Volume

1.9 L (outer) / 1.5 L (inner)

Double Insulation

Keeps Cold:
7.7+ days

Maximum
Cooling Performance

1.9 L (outer) / 1.0 L (inner)

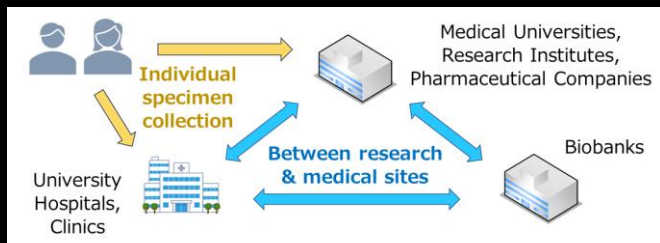
Nationwide Coverage
(incl. Remote Islands)

For International Transport
(with Customs Delay Risks)

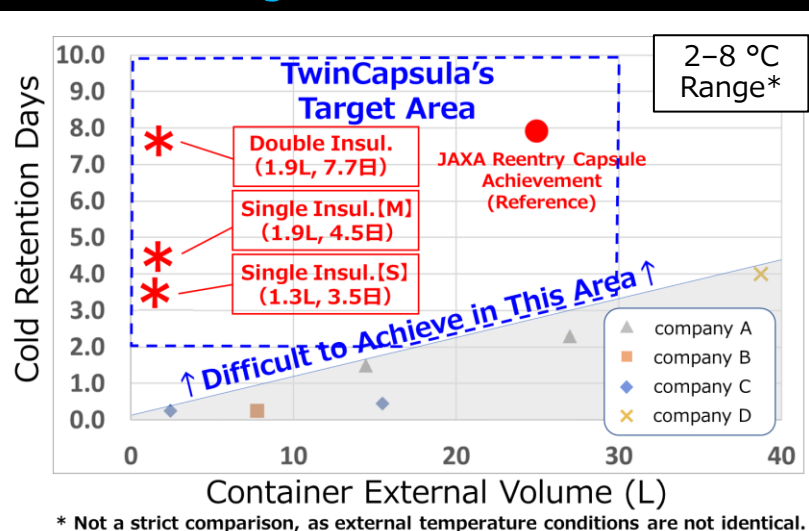
Key Benefits

- ◆ High insulation & cooling
-> **long-term preservation**
- ◆ Compact & spacious -> **Miniaturizable**
- ◆ Wide temperature range
-> **-70°C ↓、-20°C、4°C、20°C、37°C etc.**
- ◆ Simple design -> **Easy handling**

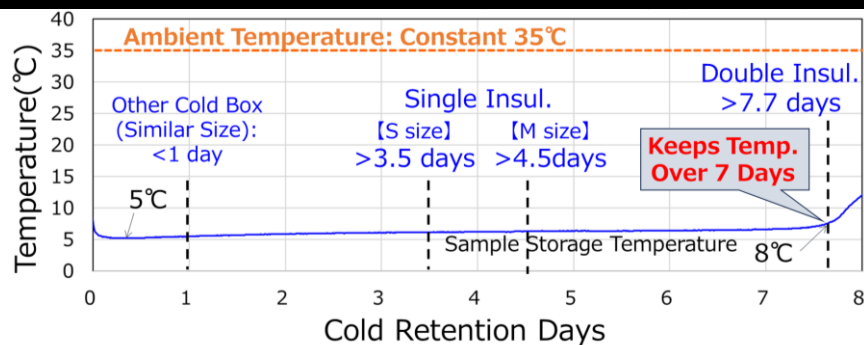
Main Uses



Performance Comparison with Existing Cold Containers



Cold Retention Test Results Double Insulation (2-8°C example)



Reliable × Low-Cost Transport

— Achieved in **Domestic & International Shipping**

Performance by Temperature Range

Single (size S)*¹ Double*²

20°C ≈ **5.2 days** ≈ **11 days**

4°C ≈ **3.5 days** ≈ **7.7 days**

-10°C ≈ **3.3 days** ≈ **8.8 days**

Below -70°C ≈ **3.5 days** ≈ **7.9 days**

Ambient temperature: constant 35 °C
Sample storage height: *¹ 100 mm, *² 60 mm



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