

Lyo-Stable™ service

Localized (US and Europe) lyophilization sustainable solution

Our Lyo-Stable™ service, powered with Ready-To-Go™ stabilization technology draws on our deep technical expertise and troubleshooting capabilities and offers complete reagent and assay stabilization solutions, designed to help accelerate your diagnostic assay development.

- **Regulatory and compliance considerations**
  We understand that you need to comply with global regulatory requirements, making local manufacturing, often GMP-certified, a strategic advantage. We offer ISO13485 and GMP-certified (if required) production to support regulatory alignment and quality assurance for sensitive applications in US and Europe.
- **Supply chain efficiency and sustainability**
  We understand that international shipping delays and customs clearance bottlenecks are significant pain points when shipping reagents and buffers to manufacturing sites for lyophilization. A regional manufacturing presence mitigates these risks by keeping production closer to the point of use and makes the approach more sustainable. We offer regional manufacturing in the US and Europe for shorter transit times, fewer regulatory complexities, and a more streamlined, sustainable supply chain.
- **Product integrity and stability**
  We understand the need to minimize transit times to reduce exposure to environmental variations that can affect the quality and reliability of the reagents and buffers being shipped for lyophilization. We offer regional production to help you more rapidly adapt to market demands and supply fluctuations and can accommodate small to large batch production scales, from early-stage development to full commercial manufacturing.

Multiple lyophilization formats

A wide range of formats, excipients, dispensing options and custom labeling are available to meet your product specifications.

	Cakes	Beads
Batch capacity	5000–25 000 reactions	5000–300 000 reactions
Dispense volume	5–100 µL	Currently 8–30 µL
Dispensing options	Manual, automated	Automated
Plastic ware	PCR plates, strips (preferred), customer designed device or cartridge	96-well plates/strips/tubes, customer designed device, and bulk beads

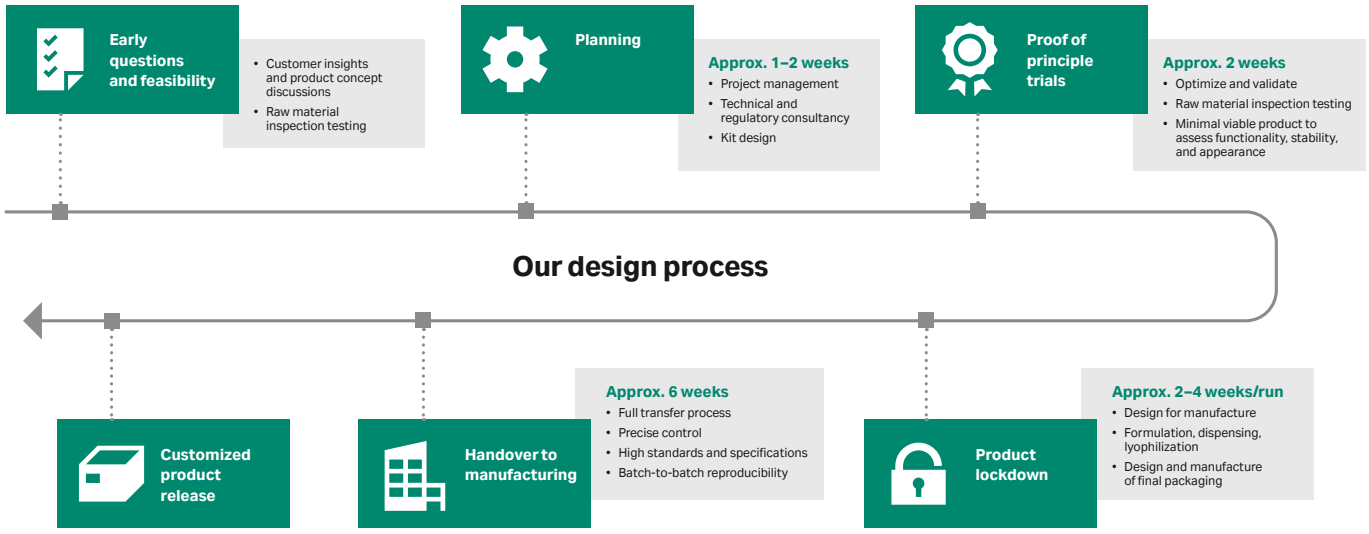
Your made-to-order cake or bead will contain our proprietary excipient mix to stabilize your temperature-sensitive assay for storage and shipping at ambient temperature. All you need to add is your sample and you are ready to go!

Lyophilization, also known as freeze-drying or cryodesiccation, is the process of removing water from a sample without the need to apply heat, to stabilize the sample.

Besides increasing sample shelf life, freeze-drying samples also reduces sample weight and volume, reduces the risk of contamination and eliminates the need to refrigerate samples, decreasing shipping and storage costs.



Typical stages of the Lyo-Stable process



Why lyophilize?

Feature	Benefits
Stabilization based on a proprietary mixture of a range of excipients combined with lyophilization	Provides up to two years' room-temperature stability, with no loss of activity.* Stable at a wide range of temperatures
Pre-dispensed, single-dose reagents	Requires fewer pipetting steps Reduces contamination risk Requires less sample handling Improves data quality Reduces training requirements Compatible with downstream applications and automation
Simplified logistics and reduced environmental effects	Does not require dry or wet ice shipment Simplifies shipping across countries Provides significant cost savings Reduced weight and volume make lyophilized samples more environmentally friendly for shipping
No need for refrigerator or freezer storage	Supports applications for field use Enables storage in remote or lowaccessibility regions Enables storage in locations with limited infrastructure Provides significant cost savings

*Based on our standard Ready-To-Go portfolio

cytiva.com/lyo-stable

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