



Cryopak[®]

A 4-STEP APPROACH TO COLD CHAIN

Increase operational efficiency in the food, life sciences & pharmaceutical industries

Step 1

ESTABLISH A SPECIALIZED & COMPLIANT COLD CHAIN NETWORK

A cold chain network consists of all the facilities and assets that are in place to manage the cold chain, such as warehouses and cold chain packaging systems. It also includes IT systems that monitor your temperature sensitive products. While these assets and IT systems provide you with the tangible network to manage the cold chain, employees and their expertise in cold chain management are what make the network function. Investing in knowledgeable and experienced staff is a must in order to keep the cold chain network both compliant and efficient.

Cold chain management involves maintaining temperature integrity throughout the supply chain. Controlling such processes involves high levels of coordination and integration. Each supply chain partner – whether it's the producer, distributor or ultimate seller – must work together and share the responsibility.

Pro Tip: Ensure that your supply chain partners are fully aware of and agree with your standard operating procedures. This collaboration will aid in mitigating any cold chain deficiencies and will ultimately help you maintain the integrity of your products.

Step 2

SET CLEAR AND CONSISTENT PROCEDURES

For your cold chain to work effectively, well-defined and consistent standard operating procedures (SOPs) are a must. SOPs refer to step-by-step instructions that are used to transport thermosensitive products in the most effective way possible.

SOPs address various variables:

- Product Characteristics
- Environmental Conditions
- Instruments used
- Storage Conditions

Your SOPs should be a constant work in progress. You should always work on optimizing your procedures based on your experience with past temperature sensitive shipments.

It's also important to understand the risks involved before you ship your products. Prior to shipping your thermosensitive product, conduct an assessment of potential risks and develop contingency plans to avoid or mitigate those risks.

Pro Tip:

When assessing the risks involved, collaborate with your cold chain partners to build procedures around risks so you can react quickly if such situations arise.

Elaborate worst case scenarios so everyone knows how to react.





Step 3

USE APPROPRIATE COLD CHAIN PACKAGING

A variety of packaging and technology options are available that can maintain specific temperature conditions for your products throughout the distribution process.

Active Solutions: Include containers with advanced temperature controls that are typically electricity or battery powered. Such shipping configurations actively respond to adverse external temperatures.

Passive Solutions: Include conventional packaging solutions. Such packages make use of polystyrene foam, gel packs, phase change material, or dry ice to keep products at a desired temperature. They reduce costs and performance risk, optimize load volume, and allow multi-temperature products in one shipment.

Pro Tip: Should you go the active or passive route? There is no right or wrong answer as it depends on many variables. You should weigh the costs of each option, along with the risks and benefits.



Step 4

Make the Invisible Costs VISIBLE

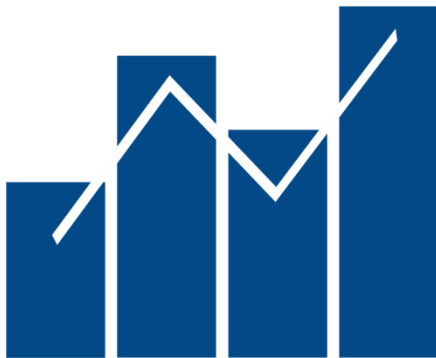


Shipping thermosensitive products can be costly, especially when considering the “hidden costs” of cold chain logistics. A growing number of cold chain manufacturers and distributors are moving away from managing costs on a purchase-price basis and are integrating the concept of **total cost of ownership (TCO)** into their decision making.

Simply put, TCO is an estimate that includes the direct and indirect costs generated by the ownership and use of a product or system. This allows you to **evaluate the total financial outcome of a purchase decision**, and then make the right choice. While the invoice price is easily visible and an important factor, it only represents the tip of the iceberg. There are other associated indirect costs that can have a substantial effect on the total cost of your cold chain solutions (see picture on the left).

Take for instance the cost of a spoiled biopharmaceutical pallet due to an uncontrolled temperature excursion during transport. The cost of the loss not only includes the product loss, but also disposal, market share loss, and regulatory issues.

Pro Tip: The invoice price often represents a small portion of the total cost. When making cold chain decisions, such as purchasing special equipment or determining which type of transport to use, make sure to factor in all the potential costs incurred along the cold chain journey. This will help you make the right decisions from the start.



Source: Harrington, L. (2015). *The Smarter Cold Chain: Four Essentials Every Company Should Adopt*. Life Sciences and Healthcare Industry Brief 2015.

Need help managing your cold chain?

Cryopak has a dedicated suite of cold chain products and services. Contact us today to speak with one of our cold chain experts and set yourself on the right path towards cold chain efficiency.

www.cryopak.ca