

## TemperPack

**Industry:** Manufacturing

**Client Since:** 2018

**Location:** Richmond, VA

### *Thermal Packaging Startup Relies on LabLynx LIMS to Validate Testing Results for Its Large Customers*

#### Overview

TemperPack's clients are large companies that must ensure that their temperature-sensitive products will remain cool during transport. A lot is at stake, sometimes millions of dollars, if products like meal delivery kits or medicine spoil during the shipping process. The LabLynx laboratory information management system (LIMS) enables TemperPack to efficiently create reports that validate testing results. In turn, this gives TemperPack's clients confidence that the company's thermal packaging will keep products at the right temperature during shipping. In addition, LabLynx LIMS has enabled TemperPack to improve lab efficiency and meet compliance standards.

TemperPack was founded in 2015 in Richmond, Virginia, where its headquarters and large laboratory (approximately 10,000 square feet) are located. The company has three other facilities across the country.

TemperPack makes sustainable thermal packaging for the cold chain shipping industry. Its packaging is used by a variety of industries for shipping perishable products such as prescription drugs, meal kits, cold desserts, flowers, and more. "We make an eco-friendly alternative to styrofoam, which has been the incumbent cold chain insulation material for the last 70 to 80 years," said Michael Scipione, TemperPack's Vice President of Business Intelligence.

Getting their products to consumers while maintaining the correct temperature range is a matter of not only freshness and quality, but also safety. That's why up-front validation of the insulation's ability to protect products for different shipping scenarios is so crucial.

#### Building a lab that tests niche applications required a customizable LIMS

Soon after the company began, TemperPack built the lab to do its own testing in-house, since there were not many third-party labs that could test their products for niche applications, according to Scipione. The International Safe Transit Association (ISTA) sets best practices for the insulated shipping container industry as well as lab certifications.

Compliance and overall efficiency were the two main reasons the lab needed a LIMS. "We needed to be able to go back and search through the test data easily," he said. Being able to ensure that all testing steps are completed was important, as was the ability to easily generate reports based on the test data.

"We had ISO [International Organization for Standardization] laboratory requirements that we had to apply in our very niche setup," he said. For instance, in a typical testing scenario, a meal kit company that distributes raw ingredients to thousands of homes each week, along with instructions on how to prepare the food, requires that TemperPack test these ingredients in typical shipping scenarios.

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“These companies spend a decent amount of their internal costs on thermal insulation, which lines the inside of the cardboard box and serves as the only protection for the package’s perishable contents from the weather extremes experiences in the back of a truck throughout the country. As a testing lab, it’s our responsibility to subject a realistic shipment to a variety of environments that represent what the shipments may experience during their journey from our customers to their consumers and monitor the temperature of the perishable items throughout the test using temperature data loggers,” he explained.

TemperPack’s lab has large chambers that can simulate a variety of scenarios, such as the temperature in the back of a delivery truck in May in New York, or in August in Texas. “We have this ability to really stress test the packaging, but ultimately what matters is the internal product,” Scipione said.

Reporting the results of these types of tests to its customers is crucial to TemperPack’s business to meet the requirements of existing clients as well as to enable the company to acquire new customers. “If we tell a customer that we’re going to keep their \$10,000 prescription payload cool through the heat of the summer, for 48 hours while it ships, that amounts to millions of dollars of product over the course of a year. They’re not just going to trust our word. They’re going to want to see the data,” he said.

The LIMS has helped with new customer acquisition because it makes it easier for Scipione to go back and search for data from tests that TemperPack has already performed for similar clients in the past, and to provide these potential customers with custom reports that are just as appealing to look at as they are informative.

With LabLynx, TemperPack has been able to maintain a small lab staff of approximately five technicians on any given day, with additional staff sometimes getting involved with specific tests.

The LIMS checks that all data points are collected, and it ensures that testing parameters are met for improved efficiency and reduced errors in the lab. “We use batching and have to define which parameters we intake or which data points we want to collect for different batches,” Scipione said. “If you have a test that requires four batches, it has to go through those four batches in order, entering in the required data points along the way, before the system will let you close the test and generate a report. This allows us to ensure we’re executing tests the same way each time, which is crucial for the integrity of the results.”

The LIMS also ensures that data is secure. At LIMS go-live, TemperPack had LabLynx set up an FTP site that enables the lab staff to drop in raw data from its instruments into the database. “That allows us to have a redundant backup of the raw data without anyone having to manually upload each and every data set,” he said. “LabLynx hosts our database, but it’s private. We’ve built in-house applications that communicate with the LIMS to help us search the data better. And we couldn’t have done that without a private server.”

With LabLynx LIMS, TemperPack has been able to build customized reports that summarize everything that happened during a test, as well as capture all the relevant data. The data can be exported directly into these reports, which are customized with the company’s branding.

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### Why TemperPack chose LabLynx LIMS

Scipione and his engineers considered a number of vendors before choosing LabLynx. “There is no off-the-shelf LIMS that could do what we needed it to do given our niche application. We knew we would either have to choose an off-the-shelf product that required a lot of customization or build something from the ground up,” he said.

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Scipione said that there were other LIMS vendors that could also provide the customization he needed, but they priced their solutions “prohibitively high” or tried to tell him that TemperPack was too small for them. “As a startup company, we were not a big enough client for them to warrant customization.”

He continued, “LabLynx was fair and told us, ‘We can make it do whatever you need it to do. You pay the time and materials for it.’”

### Another satisfied LabLynx LIMS customer

Once the decision was made to collaborate with LabLynx, Scipione worked closely with one of the software company’s applications engineers, Stephanie Pate. “As a former user herself, she knew how the LIMS system operates very well, and I spent a lot of time brainstorming with her on how we could get our process fit into their product.”

“Stephanie was extremely great to work with both when it came to her knowledge of the system, and in making suggestions about what the LIMS could do. After collaborating with her, LabLynx’s development team adjusted the code, and then went through the cycle of testing to make sure everything was just right before going live,” he said.

Since then, Scipione said he’s been very happy with the support he’s gotten from LabLynx. “Stephanie is always quick to respond and very thorough on the follow-ups.”

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