

Case Study: Eliminating the bottleneck

Overview

Platte Chemical blends and formulates agricultural chemicals including herbicides, insecticides and fungicides. The Platte facility in Greenville, MS, 150 miles southeast of Memphis, produces the bulk of two of Platte's major products: a glyphosate-based contact herbicide and an ethephon-based cotton defoliant. Quality Assurance Manager Jonathan Toler supervises the laboratory here, drawing on his academic background in chemistry and his 17 years of experience working for Platte, to ensure the plant turns out high quality agricultural products in the proper concentrations to ensure Platte's customers can rely on the products to handle their crop needs. "This is an industry where testing is critical," Toler observes. "All of our products are concentrated and many, if not mixed properly can damage crops, or sterilize the ground. It's important we make sure our ingredients are within manufacturer specifications so the farmer will get the proper performance out of it."

The Challenge

"We had a bottle-neck in production" is how Toler assesses the situation of the Greenville plant prior to using QTA. At that time, the plant was using High Performance Liquid Chromatography (HPLC) to test its glyphosate herbicide and the titration method for its cotton defoliant product. Both methods were very time-consuming. Preparing and analyzing a sample for HPLC analysis usually took 30 minutes, while the titration process typically required three hours in order to determine the active ingredient content. "We were limited to 700,000 gallons per month in terms of production capacity simply because of the time involved in testing," says Toler. The older testing methods involved great expense as well as a slow-down of production, with the purchase of HPLC columns, as well as reagents typically running well over \$1,000 per month. "Outsourcing is not an option in our business, so until we learned of QTA, we were

restricted to high cost methods which limited our production capacity," notes Toler.

The Solution: Quality Trait Analysis

Four years ago, Toler and the rest of the production management team at Platte's Greenville production facility shifted from the older testing methods to Quality Trait Analysis. "The transition to QTA has had a huge positive effect on efficiency," Toler observes. "This new technology provides a way around what used to be built-in limitations to our production."

How Platte Benefits From Using QTA

Reduced Testing Time Increases Production Output



"With QTA," Toler says, "we went from the 30-minute testing involved for HPLC and the 3-hour wait for the titration, to only 5 minutes for both kinds of testing. Literally, that's all the time it takes for the QTA system to tell us if we have the correct concentration of our primary ingredient. "At Platte's Greenville plant, this reduction in testing time has translated into a significant

increase in the plant's production. "Previously we were producing only 700,000 gallons a month, now we are able to run as much as 2 million gallons per month through our facility. QTA gave us the ability to eliminate our bottleneck."

Enhanced Personnel Functionality

"The QTA system is fool-proof," says Toler. I don't need to hire someone with a chemistry degree or even a Quality Assurance background to run the tests, all someone needs to handle QTA is basic computer skills. I have literally trained people to use this within just a few minutes.

Reduced Costs

"What we were spending each month for HPLC and titration consumables was much higher than what we pay QTA now and we get their around the clock service. The instrument itself is great, it's built like a tank, there is very little

that can ever go wrong with it. Plus the QTA tech support team is phenomenal, they really take good care of you,” Toler states.

Conclusion

“Given the importance of testing the concentration of agricultural products, you can’t do better than QTA. I highly recommend them to anyone who works in this field who wants to see their plant produce more while spending less on analysis,” says Toler.

About Cognis’ QTA[®] Business

QTA[®] is a service business within Cognis Corporation – a worldwide supplier of innovative specialty chemicals and nutritional ingredients, with a particular focus on the areas of wellness and sustainability. The company employs about 5,500 people, and it operates production sites and service centers in 30 countries. Cognis’ QTA[®] business provides on-site, ready-to-use analytical capabilities without additional investment in equipment or personnel. Patented, centralized calibration technology enhances accuracy. For more information on the QTA[®] system, visit www.qta.com

Cognis is part of the BASF Group, the world’s leading chemical company. In 2009, Cognis recorded sales of about 2.6 billion euros and an Adjusted EBITDA (operating result) of 364 million euros.

Contact

Barbara Stefl, QTA Global Business Director
Cognis Corporation
Phone: (513) 482-3135
Email: Barbara.stefl@cognis.com