

CLEARING THE CLUTTER

HOW TO ACHIEVE ENTERPRISE-WIDE
INVENTORY INSIGHT WITH BIOVIA CISPRO
USE CASE



Challenge:

Disconnected lab solutions creating process and organizational inefficiencies, increasing cost and extending product development cycle time

Solution:

BIOVIA CISPro for a unified materials knowledge base

Benefits:

- Global deployment in under 18 months
- Increased manufacturing capacity by 200%
- Reduced chemical storage, disposal, and acquisition costs
- Improved supply chain management and decreased product development time

CUSTOMER: A GLOBAL LEADER IN SPECIALTY CHEMICALS

This BIOVIA customer continually seeks to drive innovation at the intersection of chemistry, biology, and physics. For decades, its thousands of employees have created various solutions for the agriculture, automotive, construction, consumer goods, electronics, energy, and packaging industries. To continue this drive towards industry-leading innovation, this customer approached BIOVIA to develop a unified materials knowledge base for its 18 global manufacturing and development research sites.

CHALLENGE: INEFFICIENCIES IN INVENTORY DATA FROM DISCONNECTED SOLUTIONS

This customer approached BIOVIA because it found that it was struggling to provide a fundamental need for its users; valid and efficacious materials data. This was driving significant process and organizational inefficiencies across the enterprise. The customer had a legacy inventory system in place as a part of a larger lab informatics deployment, but the collection of disconnected point solutions were causing more issues than those they solved. Users noted difficulties in ordering materials within the legacy system, often causing multiple orders for the same material, which would drive up development costs. Additionally, it was difficult to integrate information about those materials into their experiments, and, while barcodes were present on every container, those barcodes could not be used in a meaningful way, creating data traceability issues and limiting the value of the data users were able to create. It became clear that a greater portion of the materials lifecycle needed to be managed because although the solution logged the registration, receipt and disposal of materials, those steps represent only a small part of the chain.

The disjointed nature of the informatics landscape also meant that users were faced with the need to access up to 10 separate systems, such as electronic notebooks, that had been developed to deal with specific elements within the labs. While each of these tools was necessary, significant and time-consuming challenges were created resulting from a lack of integration and common data standard.

SOLUTION: BIOVIA CISPRO FOR IMPROVED MATERIALS KNOWLEDGE

Capturing value from materials data begins with an established and complete data workflow; however, teams must start collecting data about a material even before it arrives on site. For organizations in need of a simple way of registering a material, BIOVIA CISPro, a cloud-based chemical inventory system, manages data for both purchased materials and those developed in-house and provides access to a single source of truth for this data at the enterprise level. The BIOVIA CISPro Materials Lifecycle Management (MLM) module has the capability to link to external catalogues and bring supplier data directly into the system, reducing costs and curating accurate data for each supplier. That information can then be linked through components or constituents.

For example, an antimicrobial is composed of multiple materials, and if those individual materials are added to BIOVIA CISPro MLM, users can gain greater transparency into their recipes. This is achieved by linking individual ingredients to their all their supplier info, such as the types and amounts of trace impurities in one brand of citric acid. Users can thus gain a deeper understanding of supplier to supplier variations for their ingredients and how they affect their recipes. Materials can also be tied to individual tests and samples, which in turn can link back to the material's receipt lot so that all tests and results relating to that material are instantly visible. As a result, teams can rapidly adapt to changes in supplier availability, manufacturing requirements or local regulations. With BIOVIA CISPro, this level of traceability can be scaled up from individual ingredients up to full products in both regulated and unregulated environments.

BIOVIA CISPro offers a scalable solution for small as well as global organizations. When the process to deploy BIOVIA CISPro began, the manufacturer had 18 independently managed sites spanning four continents; however, BIOVIA CISPro was fully deployed at all the sites within 18 months. This shows that BIOVIA CISPro results in a very short time to value, which minimally impacts legacy IT assets and ensures the protection of prior investments.

RESULT: AN ENTERPRISE-WIDE KNOWLEDGE BASE FOR MATERIALS

Agility within any research and development organization is a necessity, but for those operating on a large, multinational scale it becomes even more critical. BIOVIA CISPro provided a unified framework to collect the correct data when it was needed. Today, the customer now operates as a single global organization in terms of chemical and material management.

The growth from individual regional sites to a unified global structure took time to accomplish but every site and every business now runs under the same framework and set of policies. A major goal for both the customer and the BIOVIA team was to not simply add a software solution but also leverage the workflow changes that implementing BIOVIA CISPro would cause. In this particular case, there were a few unexpected results. The manufacturer was able to increase pilot plant capacity because they eliminated double and triple bookings by people who were essentially being overly cautious about material availability. This elimination resulted in an

increase of capacity of more than 200%. Another area that benefited was the lab. Historically, the customer's researchers would stockpile chemicals to ensure no interruption of their experimentation. The addition of BIOVIA CISPro, coupled with education on how the system would help, the amount of chemicals stored, the amount of disposal needed, and the number of chemicals that met their expiration date was drastically reduced. Lastly, the company as a whole now has the ability to leverage previously collected data. Harvesting all their materials data and knowledge and running analytics on it have provided insight into how to more effectively manage supply chains and decrease product development time.

Many companies are shifting to a holistic materials management strategy from more traditional methodologies. This brings greater transparency into the complete lifecycle of materials within an organization. As this example demonstrates, one of the most powerful aspects of this shift is realized when a unified system is employed which also accounts for the day-to-day needs and activities of a company's employees.

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