

Public Enemy No. 1: Allergens

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Ensuring the safety of their products is always the number one priority for food and beverage manufacturers, not only to protect profit margins by reducing recalls but also to ensure the integrity of their brand and the well-being of customers. However, with the increasing diversification of product lines, the risk of recalls due to the cross contamination of allergens has never been more prevalent. There are three techniques that every food & beverage manufacturer must use in order to ensure their products allergens are properly labeled and there is no cross-contamination: digitized work processes, traceability and accurate labeling.

Digitizing the SOPs

The centerpiece of any good safety program is standardized operating procedures (SOPs), which help operators to consistently adhere to recipes, meet their [Hazard Analysis and Critical Control Points](#) [1] (HACCP) Plans and comply with their Food Safety Plans. By moving these SOPs out of the old fashioned printed manuals and forms and into workflow software programs, manufacturers can digitize manual and automated work processes. Addressing the need for better operator guidance, digitization helps them follow SOPs and instructions with greater precision, ensuring that equipment is properly decontaminated of allergens and other dangers before production begins.

Through validated entry, workflow software captures data for analysis and historical records. It can help automate and manage HACCP monitoring, integrating production work processes with real-time HACCP testing, enabling faster response to compliance issues.

For example, workflow can help manage a HACCP plan by automatically triggering HACCP sampling based on production events or elapsed time. This gives operators work instructions that connect production actions with real-time quality data. Such capabilities enforce HACCP and other SOPs, including allergen management processes, and mitigate risks for inconsistent actions that could lead to quality problems and recalls.

Tracking and Tracing Allergens

Many variables can affect the availability and reliability of data on the plant floor and throughout the supply chain, which can be difficult to track and trace. Traceability has often been applied solely to minimize the impact of recalls and aid customer complaint investigations, but using it to improve food safety and monitor allergens can all but eliminate product recalls.

Software that offers rich traceability capabilities can trace ingredients through the entire production process to ensure proper labeling of allergens for each product.

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Once production is complete the process can continue through the rest of the supply chain onto the store shelf and finally to the consumer.

Every product can now be traced throughout every step of the manufacturing process, identifying its exact materials and quality characteristics. It allows the flow of the product to be controlled between equipment and managed in-process inventories with greater transparency, and hence, mitigation of cross contamination of allergens between production orders.

This type of software can leverage raw material intelligence and integrate the data to trace complex batches, continuous processes, sub-processes, and components or by-products. The origin and destination of all incoming materials and outgoing finished goods are known—improving food safety. By tracing raw materials to finished product, tighter controls can be put into place to safeguard the supply chain.

Matching Labels with Ingredients

In addition to ensuring that processes are followed and ingredients traced, it is imperative for food manufacturers to guarantee that allergens and other variables are accurately and reliably labeled. In fact, the mismatch of ingredients and packaging is the number one cause for food recalls today because of allergens that are contained in the product, but not disclosed on the label. While the food manufacturers have certain measures in place to aid in this effort, they are sometimes not enough. Manufacturers need to guarantee that the ingredients in the packaging match the label without fail, every time. There is no acceptable margin of error.

Today's technology converges machines and intelligent data, which allows manufacturers, for example, to scan the bar code on a box, can or bottle, and instantly know if there is any variation between the label and the actual ingredients. If there is some sort of discrepancy, the product will be re-inspected before leaving the plant and the entire lot can be put on hold until the plant manager can troubleshoot the problem and fix it.

Manufacturers can implement another step in quality control, serving as the door to a vault so that only the products with the right combination will be able to open it. The added step can ensure that a mislabeled product never leaves the plant. Once the troubleshooting and problem solving has been documented - electronically, of course - the information can be used to improve best practices.

This application of the technology could put an end to undisclosed allergens being present in food products. Ingredient labels help protect against exposure to life threatening allergens, therefore need to be 100 percent accurate, 100 percent of the time. The ability for manufacturers to match ingredients to packaging could help eliminate one of the biggest health risks today.

Allergens Top-of-Mind

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Eliminating the risk of cross contamination due to allergens should always be at the forefront of the food safety decision making process and taken into account when implementing new technology or processes. By enacting techniques such as digitized work processes and utilizing new technology to improve traceability and ensure accurate labeling, food safety manufacturers can take the next step and help move towards eliminating any and all recalls due to allergens.

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Links:

[1] <http://www.fda.gov/food/guidanceregulation/haccp/default.htm>