



MAP indicator monitors whether packaged products continue to meet pre-determined quality criteria

COMPANY/
ORGANIZATION



FOOD CHAIN
AREA



ISSUE
ADDRESSED

The food industry destroys significant quantities of pre-packaged batches of chilled products annually. The packaging of these products is filled with nitrogen to prevent the food products from coming into contact with oxygen. If the packaging is not airtight because of faulty sealing or punctures, the products will spoil. If a package is found to contain too much oxygen because of a leaky sealing or puncture, the entire batch is destroyed. Around 2 to 10% of MAP packages are destroyed based on random checks, which can lead to unnecessary food waste and cost to businesses.

SOLUTION

Sensor Spot's MAP indicator is a smart control system consisting of an oxygen sensor implemented in a foil in combination with a readout device. The oxygen sensor can determine whether a food product is properly packed. A luminescent dot lights up when the food product is exposed to oxygen. A new printing technology is used to place the sensor on the inside of the packaging foil, which is then laminated to ensure that the sensor is not in direct contact with the food product. The bottom layer is permeable so that oxygen molecules in the packaging can reach the sensor. The sensor material cannot permeate the foil in the other direction. The packaged products pass a read-out system that includes a camera. The read-out system's software is set to recognize whether an acceptable oxygen level has been exceeded. The cameras can be installed at the end of the packaging line, at a distribution center, or a point of sale.





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EXPECTED BENEFITS

Reduced food waste: The indicator makes it possible to check each individual package for quality and reduce unnecessary food waste.

CASE LINK

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