

## Electronic nose: a research screening & quality making decision tool



Grace is a premier specialty chemicals and materials company, applying innovative technologies to provide value-added products and service. One of its divisions, Darex, is the world's leading supplier of sealants and coatings for cans and closures to the packaged food and beverage industry. It provides protective coatings, closures and sealants for the best-known brands of bottled and canned soda, canned foods, snack foods and condiments.

WR Grace manufactures over 20 varieties of polyolefin pellets manufactured for packaging. Quality Control (QC) of each production batch is currently achieved by a long and resource-demanding procedure:

- Samples are collected from each lot
- Many working days are required to prepare samples for testing
- Trained panelists have to evaluate each sample based on a reference scale (score from 0 to 10).

### Reduced inventory cost

**“The Electronic Nose can dramatically decrease storage times and costs, diminish the need for panel tests and provide a more representative score”**

"We purchased a GEMINI Electronic Nose in order to overcome the major drawbacks of the current QC method: the inventory period, increase the number of tests conducted and diminish the need for panelists.

The E-nose was installed at the production QC lab, as a first step, it was used for the QC of pellets

accounting for the major part of production. Once freshly produced pellets have been cooled, samples are collected and analyzed with the Gemini within minutes. Disputed lots are further assessed by the sensory panel to make a final decision on the release. In order to guarantee the highest level of quality the instrument is presently configured to be stricter than human tests."

## WR Grace



### Activity

Production of sealants and coatings for cans and closures aimed at the packaged food and beverage industry

### Context

Need for a fast Quality Control method to check polyolefin pellets in order to reduce inventory delays

### Equipment

GEMINI Electronic Nose

### Website

<http://www.grace.com/>

### **Faster, easier and more representative**

"From a QC lab point of view, the use of an electronic nose significantly simplifies sample preparation and generates easy to understand results. As for production, it can dramatically decrease storage times and costs, diminish the need for panel tests and provide a more representative score (larger number of samples tested).

Since the impact of the E-Nose proved to be positive, we implemented another electronic nose internationally."

