

SunAllomer Ltd. is a Japanese manufacturer of polypropylene resin, and it is actively doing business in the Asia-Pacific region as a core company of Basell Polyolefins, the world's largest producer of polypropylene and a leading supplier of polyethylene and catalysts.

**SunAllomer Ltd.**

Introduction of the Gemini System

"It is believed that the major cause of polypropylene odor is additives such as antioxidants, ultraviolet absorption agents, and nucleating agents. These additives may be partially decomposed in the process of molding, and they may produce stimulant compounds.

As odor control has recently become more important in the food industry, we have experienced a greater need to thoroughly prevent stimulant compounds from being contaminated into the products that are used for retort pouches, food packaging, and food containers. We also needed to introduce a reliable odor controlling system for the production line.

Transition from Sensory Evaluation

Before introducing the Gemini System, we conducted odor evaluations of products by sensory evaluation. The method, however, had the following problems:

- 1) The evaluation results depended on the physical condition of the panelists.
- 2) If any odor problem was found, the preserved sample was not suitable for re-evaluation or GC/MS testing because the odor level usually changed from the first evaluation.

For controlling odor, it is desirable to constantly perform relative evaluations to the same standard, but it is also important to keep detailed inspection data of odor levels from batch to batch. We felt that the best solution was to introduce the Gemini Electronic Nose System. After the Enose's correlation with sensory evaluation was demonstrated for the various products, we shifted from the sensory method to the new Gemini.



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Taking more advantage of the Gemini

Currently we use the Gemini only for pass/fail criteria in the final production stage. In the future, however, we plan to use the Gemini for odor evaluation in the R&D phase. During the development of low-odor products, this reliable instrument will give objective results of the odor differences of different types and formulations of ingredients. These results may be presented to our customers and can also be used as a reference tool for product improvement. We hope to take more advantage of the Gemini in this and other ways."