

## Maintaining the highest quality standards in fruit juice production

Mainfrucht GmbH & Co. KG



Mainfrucht, established in 1956 and located in Gochsheim, Lower Franconia, Germany, processes domestically grown fruits and berries as well as some imported exotic fruit into high quality fruit juice concentrates, fruit purees, fruit preparations, and vegetable products. Large quantities of raw material are converted to juice and purees on a daily basis allowing the company to offer this wide variety of products for further processing to beverage, alcohol, dairy, bakery, diet food, and baby food manufacturers as well as to the pharmaceutical and cosmetics industry.

### New lab technology

In early 2014, the company reorganized their laboratory and replaced decades old technology adding a Thermo Scientific™ Gallery™ discrete analyzer (which the staff affectionately named “Gustav”) to their existing specialized equipment. Because customers demand the highest quality end product, careful treatment of all fruit components is required to maintain strict standards for the entire manufacturing process.



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Uta Handlmaier and Bettina Lechner  
Mainfrucht GmbH & Co. KG, Gochsheim,  
Lower Franconia, Germany

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▲ At Mainfrucht quality is continuously checked from reception of raw materials to release of the finished products by qualified and experienced lab personnel.

### Exhaustive testing

Levels of ethanol, for example, cannot exceed 3 g/L since some of the fruit products are used in baby food. The final product is analyzed for total sugars (glucose, fructose, and sucrose), ethanol, lactic acid, and acetic acid. In addition, they test for iron and sorbitol and will eventually add a methanol analysis. Since the lab receives an inconsistent number of samples per day (between 20 to 40), Uta Handmaier and Bettina Lechner commented, "The Gallery is flexible enough to add samples at any time and capable of running various tests simultaneously." Samples can be added without interrupting a previously requested run and results are available quickly, usually in as little as ten minutes.

As previously mentioned, there is a need to stay in compliance with quality control and state certification requirements. Two tests are done on the Gallery for this exact purpose:

- An iso-citric acid test certifies that the liquid in the sample is truly orange juice.
- A d-malic acid test will indicate if an artificial acid was added to the liquid.

Their worldwide customers ask for specific results and quality control and consistently receive them from this lab.



▲ Lab technicians at Mainfrucht use state-of-the-art technology to ensure careful treatment of all fruit products in order to meet the demands of customers for the highest quality end product.



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