



## Shelf life testing of dairy products in China

**China has discovered milk. In order to meet the demand of more than 1.3 billion people, companies such as Bright Dairy & Food build state-of-the-art production facilities. In this report, AtmoSAFE pursued the question of why the Chinese have started drinking milk thousands of years after the Europeans and also visited the quality laboratory of Bright Dairy & Food. In the laboratory, a Memmert Peltier-cooled incubator is used for microbiological testing and shelf life testing.**



Memmert  
Peltier-cooled  
incubator IPP

Chinese agriculture is traditionally characterised by rice cultivation. Cattle were mainly bred for meat and not for dairy farming. However, this is changing at breakneck speed. Due to the widespread calcium deficiency in children, schools in China started to hand out free milk drinks starting in the 1990ies. Food from other cultures found its way into super markets and thus **dairy products** have now become an integral part of the diet of many Chinese.

## The dairy industry in China



Although China is still a "developing country" when it comes to drinking milk, the **dairy product** market shows enormous growth rates. On average, each Chinese consumed 1.54 kg of fresh milk and 0.28 kg of yogurt in 2006. Germans, in comparison, consumed 53 kg of fresh milk and more than 16 kg of yogurt each. In 2013, the combined per capita consumption of **milk** and yogurt already increased to more than 11 kg in China. The national dairy industry is not able to meet the demand of the more than 1.3 billion people, which is why a large portion of **dairy products** consumed is imported from New Zealand, Germany or the USA. At the same time, companies like **Bright Dairy & Food** invest in creating modern and efficient production chains, from fodder cultivation and breeding cattle to large dairy farms.

## Product quality as the main objective

Bright Food, the Shanghai-based parent company of **Bright Dairy & Food** with a history of more than 50 years, was the second largest food company in **China** in 2011. In addition to increasing its production capacities of **milk**, yogurt, ice cream, cheese and other **dairy products**, high product quality is the company's main objective. The focus in research and development as well as production is put on safety, freshness and nutrient content of Bright foods as well as on the health of consumers. The Chinese government is accelerating the implementation of strict standards like the traceability of batches or an unbroken cold chain during transport. For this reason, the quality assurance facilities at **Bright Dairy & Food** are of course technologically up to date.

Since 2012, the food safety team at **Bright Dairy & Food** has been using a **Memmert Peltier-cooled incubator IPP** for microbiological testing and **shelf life testing**.

Microbiological testing on fungal colonies is done at 20 °C with a duration of 3 to 5 days. During shelf life testing, the microbiological status of a product is however continuously tested over the entire shelf life period. In this case, the test duration and temperature in the **cooled incubator** vary from sample to sample. To obtain valid results, an exact



Automatic milking plant at Bright Dairy & Food

## Stability test of soya products

Before delivery, all products of Alpro undergo strict quality testing and microbiological testing in a Memmert cooled incubator IPP and heating oven U.

[more information](#)

temperature distribution and the smallest possible temperature deviations in the interior are essential. In addition to the simple user interface, long-term stability, energy efficiency as well as environmental friendliness were decision criteria in favour of the **Memmert cooled incubator IPP**.

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#### An overview of the main topics

- Dairy products
- China
- Cooled incubator
- Shelf life testing
- Bright Food
- Microbiology

#### Sources:

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Wikipedia zu Bright Food: [en.wikipedia.org/wiki/Bright\\_Food](http://en.wikipedia.org/wiki/Bright_Food)

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[english.people.com.cn/102775/203908/7692593.html](http://english.people.com.cn/102775/203908/7692593.html)

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#### Laboratory equipment for incubation

[Incubator I](#)

[Cooled incubator ICP](#)

[Peltier-cooled incubator IPP](#)

[CO2 incubator INCOmed](#)

[Cooled storage incubator IPS](#)

<http://www.memmert.com/en/produ>

