



Shelf-life of Dairy Products

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Can I eat a product after the “best before” or “use by” date?

As a general principle, it is likely that you can consume foods safely for a short period after their “best before” date. This depends on factors such as the nature of the food itself, its susceptibility to microbial growth and adherence to its correct storage conditions. However, you have to be aware that, after the specified “best before” date, the food may lose some of its organoleptic qualities such as taste, aroma, appearance or even its nutritional value. Conversely, the consumption of foods after their “use by” date should be avoided as they may no longer be fit for human consumption.

Why did my milk not last until its best before date?

“Best Before” dates generally apply to unopened packages. Once the milk package is opened, the shelf-life of this product may be reduced as a result of exposure to the environment or to changed temperature conditions (e.g., placing it outside the refrigerator during a meal).



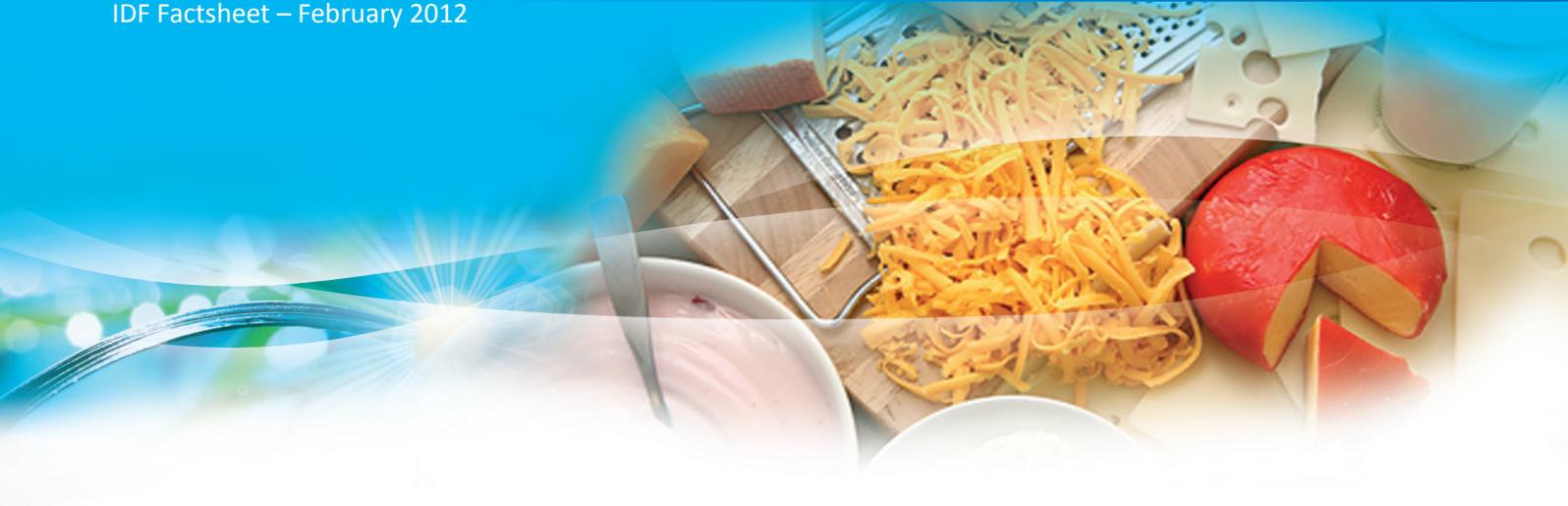
This food does not smell or look bad even though its “use by” date has expired. Is it still safe to consume?

Some harmful bacteria are able to grow to unacceptable levels or even produce dangerous toxins without necessarily having a deleterious effect on the organoleptic quality (smell, taste, texture) of the food in question. Please follow the general rule of thumb of “when in doubt, throw it out!” when dealing with food products that are past their “use by” date.

Why do some dairy products have longer shelf-life than others?

The dairy industry uses various means and technologies aimed at achieving an extension in product shelf-life. Some commonly used methods include heat treatment of fluid milk products for a pre-determined time and temperature; acidification by addition of starter culture in the case of cultured dairy products such as yogurt, kefir, or buttermilk; drying of milk concentrate to produce milk or skim milk powder; addition of preserving agents such as emulsifying salts e.g., phosphates and citrates in shelf-stable processed cheeses.

Shelf-life of fluid milk products, for instance, is dependent on various factors, namely heat treatment (also known as pasteurization), quality of the incoming raw milk, additional processes such as micro-filtration, filling conditions, temperature control and packaging technologies. However, heat treatment remains the primary factor that determines the span of the shelf-life.



The Dairy industry has been commonly applying a pasteurization process known as HTST (High-Temperature-Short-Time) which uses a combination of time-temperature of 72°C for at least 15 seconds. Under the most favourable processing and storage conditions, this HTST pasteurization process is capable of extending the shelf-life of milk for up to 3 weeks depending on the initial microbiological quality of the raw milk. Another traditionally applied process is UHT (Ultra High Temperature), which uses a high temperature (>135°C) for 1-2 seconds.



UHT products are practically sterile and can be stored at ambient temperature for a long time (e.g. “long-life milk”). The dairy industry has adopted newer processing technologies that can increase the shelf life of fluid milk beyond its traditional life with minimal adverse effects on its quality and taste (generally referred to as Extended Shelf-life (ESL) milk). Examples include Higher-Heat-shorter-time (HHST) is one means of extending the shelf-life of milk to over 50 days at refrigerated storage conditions.



International Dairy Federation
www.fil-idf.org

References

CAC (Codex Alimentarius Commission).2008. General Standard for the Labelling of Prepackaged Foods. Codex Stan 1-1985. Accessed on December 14, 2009 at www.codexalimentarius.net/download/standards/32/CXS_001e.pdf
<http://www.fil-idf.org/WebsiteDocuments/AHNewsletter2.pdf>