Advances in Dairy Research
ISSN: 2329-888X
OPEN ACCESS Freely available online
Perspective

Impact of Pasteurization on Raw milk

Alexander Rampwell*

Department of Dairy Production, GISMA Business School, Hannover, Germany

DESCRIPTION

It is evident that human milk is essential for nourishing newborns. This is because breast milk gives a newborn all the nutrients, vitamins, and minerals he needs for growth in the first few months, making it possibly the most complete diet he can consume. Colostrum is referred to until the sixth day of lactation, transition milk until the fourteenth day, and mature milk beyond fifteen days, depending on the stage of lactation. Additionally, the content varies depending on whether the infant is full-term or preterm and during feeding. One of the most effective methods to care for a child's nutritional, immunological, and psychological needs throughout their first year of life is through human milk.

The World Health Organization (WHO) advises exclusive nursing for 4-6 months and supplementation for up to two years or longer. Exclusive and on-demand breastfeeding is safe to provide without time or quantity limitations. However, in some circumstances, this exclusive breast-feeding is not always possible, necessitating the use of licensed milk banks or commercially accessible milk formulae. It should be mentioned that the use of milk formula during a hospital stay affects the length of exclusive breastfeeding, encourages more Impact of Pasteurization on Raw milk OS, and alters the advantages of the gut microbiota that result from exclusive breastfeeding [1,2].

The American Academy of Pediatrics and other major competent bodies advise using either pasteurized milk from milk banks or raw human milk from the mother herself for a child when direct breastfeeding is not possible to preserve the advantages of using human milk. There have been investigations on how pasteurization affects the preservation of biological elements. Human milk's protein composition is mostly unchanged after conventional pasteurization (62.5 °C, for 30 min). Pasteurization significantly reduced the activity of the antioxidant enzymes glutathione peroxidase and superoxide dismutase, while freezing/storage of raw milk only had an impact on superoxide dismutase.

It is now well accepted that breastfeeding, especially when done by obese mothers, can lower the incidence of obesity. 10 Studies on OS have shown a correlation with both the effectiveness of an antioxidant defence system and the imbalance between Reactive Oxygen Species (ROSs) and Reactive Nitrogen Species (NREs). It has been demonstrated that children who are breastfed have a more effective antioxidant barrier than children who are fed formula. Since fats are the main source of energy in human milk, research is being done to determine how best to replicate their lipid composition in milk formulae. Only fatty acids with carbon chains between 12 and 18 are often present in human milk [3].

Linoleic and linolenic acids, which are known as essential fatty acids and the ancestors of arachidonic and docosahexaenoic acids, Long-Chain Polyunsaturated Fatty Acids (LCPUFA), stand out among them. It is crucial for the preterm baby to have access to human milk because of its restricted ability to manufacture LCPUFA through its precursors, especially if it is very underweight. LCPUFA are thought to be essential for newborns' cognitive development as well as for the growth and development of the brain. As a result of the imbalance between pro-oxidizing agents (free radicals) and antioxidant defense systems of the puerperal body and breast milk itself, the newborn's only supply of LCPUFA, the possible function of SO is called into a challenge [4].

Protein oxidation products (AOPP), which may be used to calculate protein oxidative damage, have also been recognized as novel indicators of protein oxidation and damage. One of the byproducts of Lipid Peroxidation (LP), Malondialdehyde (MDA), is a stable chemical that may be used to gauge the overall progress of the process. As a result, the objective of this study was to assess the antioxidant and oxidant profile of fresh human milk and milk that has undergone pasteurization.

REFERENCES

1. Keikha M, Bahreynian M, Saleki M, Kelishadi R. Macro-and micronutrients of human milk composition: Are they related to maternal diet? A comprehensive systematic review. Breastfeed Med. 2017;12:517-527.
2. Vieira-Borba V, Sharif K, Shoenfeld Y. Breastfeeding and autoimmunity: Programing health from the beginning. Am J Reprod Immunol. 2018;79:e12778.

Correspondence to: Alexander Rampwell, Department of Dairy Production, GISMA Business School, Hannover, Germany; E-mail: alexrampwell@edu.de
Received: 03-May-2022, Manuscript No. ADR-22-18398; **Editor assigned:** 05-May-2022, Pre QC No ADR-22-18398 (PQ); **Reviewed:** 20-May-2022, QC No. ADR-22-18398; **Revised:** 30-May-2022, Manuscript No. ADR-22-18398 (R); **Published:** 06-Jun-2022, DOI: 10.35248/2329-888X.22.10.607.
Citation: Rampwell A (2022) Impact of Pasteurization on Raw milk. J Adv Dairy.10:607.

3. Kair LR, Flaherman VJ. Donor milk or formula: A qualitative study of postpartum mothers of healthy newborns. J Hum Lact. 2017;33:710-716.
4. Madan JC, Hoen AG, Lundgren SN, Farzan SF, Cottingham KL, Morrison HG, et al. Association of cesarean delivery and formula supplementation with the intestinal microbiome of 6-week-old infants. JAMA Pediatr. 2016;170:212-219.