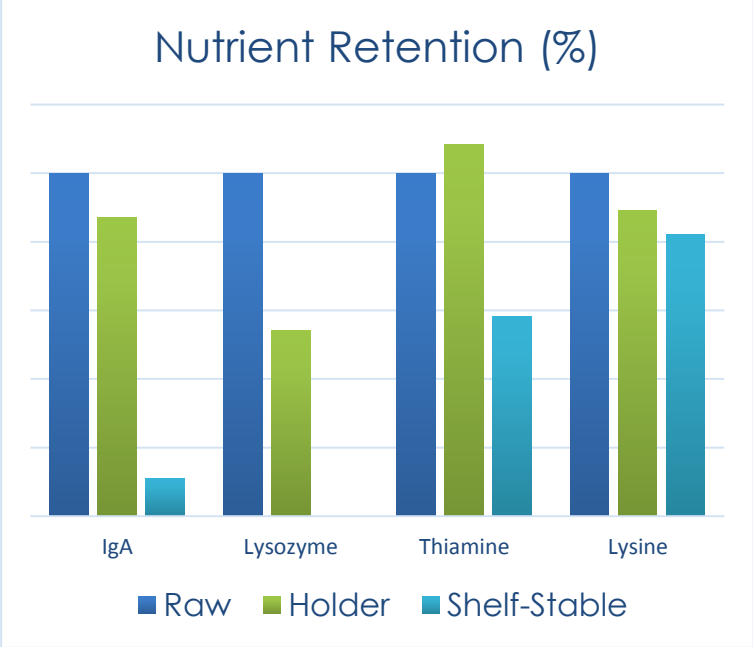
Three Important Differences Between Our Milk and Shelf-Stable Human Milk

Our network of nonprofit milk banks process donor human milk using Holder pasteurization, a low-heat method used globally within milk banking to eliminate bacteria and viruses.[1] Shelf-stable donor human milk is produced using retort processing which applies high heat and pressure, similar to canning, to sterilize the milk. So, what's the difference?

1. Holder pasteurized donor human milk retains more of the antimicrobial proteins that pass immunity from mother to infant, compared to shelf-stable human milk (87% vs 11% of immunoglobulin A; 54% vs 0% of lysozyme).[2]
2. A recent study showed significant losses of thiamine and lysine in shelf-stable compared to Holder pasteurized donor human milk.[3]
3. Most importantly, no research has been published to date showing that retort processed, shelf-stable donor human milk is protective against NEC for the premature infant.[4]



Summary

Research shows that Holder pasteurized donor human milk retains many bioactive factors and is protective against NEC. Retort processed, shelf-stable donor human milk has a high loss of bioactive factors and other micronutrients, which may translate into different health outcomes in the medically fragile infant.

More research is warranted before use of retort processed donor human milk can be recommended for fragile infants. Therefore, Human Milk Banking Association of North America's nonprofit milk banks, and other nonprofit milk banks throughout the world continue using Holder pasteurization for donor human milk.

1. PATH. (2013) Strengthening human milk banking: A global implementation framework. http://www.path.org/publications/files/MCHN_strengthen_hmb_frame_Jan2016.pdf
2. Lima H et al. (2017) Bacteria and bioactivity in Holder pasteurized and shelf-stable human milk products. Curr Dev Nutr, doi: https://doi.org/10.3945/cdn.117.001438
3. Lima H et al. (2018) Nutritional comparison of raw, Holder pasteurized, and shelf-stable human milk products. JPGN https://www.ncbi.nlm.nih.gov/pubmed/30063585
4. Quigley M et al. (2014) Formula versus donor breast milk for feeding preterm or low birth weight infants. Cochrane Database Syst Rev, doi: 10.1002/14651858.CD002971.pub3