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## Trans fatty acid content in mature breast milk among lactating women in Latvia



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### Biography

Liva Aumeistere has a Professional Bachelor's degree in Health Care (Dietitian) and a Master's degree of Engineering in Food Science (Mg.sc.ing.). Currently, she is pursuing her PhD in Food Science Program at Latvia University of Agriculture. At present, she is a Researcher in the Research Institute of Food Safety, Animal Health and Environment BIOR.

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### Notes:

Breastfeeding is a natural way to provide infant with most of the nutrients needed for proper growth and development. However, breast milk can also be a source for potentially harmful substances, like Trans fatty acids (TFA). The aim of this research was to determine TFA content in mature breast milk among lactating women in Latvia and to compare with data from other countries. The study was carried out from November 2016 until December 2017. In total, 71 mature milk (at least one-month post-partum) samples pooled within 24 hours were collected. Following TFA—elaidic acid (C18:1 n9t), vaccenic acid (C18:1 n11t) and linolelaidic acid (C18:2 n6t) were determined by GC FID instrument (Agilent; 6890N) equipped with an autosampler (Agilent; 7683 Series). TFA concentration was calculated and expressed as weight percentage (wt %) of total analyzed fatty acids (n=37). Average concentration for elaidic acid, vaccenic acid and linolelaidic acid was following – <0.1%, 1.20% and 0.19%, respectively. We observed lower elaidic acid content in breast milk, comparing to data from other countries but vaccenic acid content was one of the highest. Obtained results could be explained by different dietary patterns across the countries, however, we should analyses women's dietary habits during lactation for further explanation. Regardless, lactating mothers should be advised to avoid foodstuff containing partially hydrogenated vegetable oils as industrially produced TFA consumption is associated with impaired development of an infant.