**δ15N AND δ13C VALUES AS POSSIBLE MARKERS FOR DISTINGUISHING BETWEEN ORGANIC AND CONVENTIONAL GRAINS** (Times 12p, bold)

**Lauma Buša1, Dmitrijs Ponomarjovs2, Arturs Viksna1** (Times 12p, bold)

*1University of Latvia, Faculty of Chemistry, Jelgavas iela 1, Riga, Latvia*

*2Institute of Chemical Physics, University of Latvia, Jelgavas iela 1, Riga, Latvia*

*e-mail:* *lauma.busa@lu.lv* *(Times 12p, italic, e-pasts tikai referējošam autoram)*

Organic plant products are believed to be safer, healthier and environmentally friendlier than conventionally grown ones. However, it is still challenging to distinguish between organic and conventional products using everyday methods. Stable isotope ratio mass spectrometry (SIRMS) is offered as an alternative method [1].

In the research wheat and barley samples from conventional and organic cornfields were analysed. The conventional grain samples were collected form commercial mills all over the country, whereas the organic grain samples were obtained from Latvia State Institute of Agrarian Economics, State Stende Cereals Breeding Institute.

**Fig. 1.**  δ15N values of conventional and organic wheat grains. (Times 11p)

The preliminary results show that the δ15N values of some biological wheat samples are enriched, compared to conventionally grown wheat, as the cornfields are usually fertilized using organic manures that have significantly higher δ15N values that synthetic fertilizers [1]. (Times 12)

**Acknowledgements**. Write acknowledgments here. (Times 11p)

***References: (Times 11p, bold)***

[1] Laursen K.H.; et al. Is it really organic? – Multi-isotopic analysis as a tool to discriminate between organic and conventional plants. *Food Chem.* **2013**, *141*, 2812-2820. DOI: [10.1016/j.foodchem.2013.05.068](https://doi.org/10.1016/j.foodchem.2013.05.068) (Times 10p)

*Lūdzu, nepārsniegt 1 lpp.,teksts angļu valodā*