



Research article

## RESEARCH ON THE NITRATES AND NITRITES CONTENT IN SOME VEGETABLE SPECIES, CLUJ COUNTY, ROMANIA AND ANTWERPEN, BELGIUM

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**ABSTRACT**

The study presents the monitoring of nitrate and nitrite levels from some vegetable samples (lettuce - *Lactuca sativa*, carrot - *Daucus carota*, parsley root - *Petroselinum hortense*, kohlrabi - *Brasica oleracea* variety *gongyloides*, spinach - *Spinacea oleracea*, celery - *Apium graveolens*, cabbage - *Brasica oleracea* and beetroot - *Beta vulgaris*) purchased from a local market in Cluj-Napoca, Romania, and a supermarket in Antwerp, Belgium. The analyses were performed using a laboratory molecular adsorption spectrophotometer. Based on the t-test for method evaluation, it was determined that the method is not affected by systematic errors. The nitrite concentrations recorded ranged from 8.6 µg/g for kohlrabi from Romania to 557.3 µg/g for red beet samples from Belgium.

Comparing the results from all vegetable samples, the main conclusion was that nitrates were below the maximum level, while nitrites were significantly above the maximum permitted limit according to European legislation (for lettuce and beetroot).