

EFFICIENCY OF SOME SCREENING METHODS USED IN MONITORING THE QUALITY OF VEGETABLE SUBSTRATES AND THE PRESENCE OF MYCOTOXINS

Adina-Mirela ARITON¹, Andra-Sabina NECULAI-VĂLEANU¹, Ioana POROȘNICU^{1,3}, Elena UNGUREANU², Lucia Carmen TRINCĂ²

e-mail: amariton@yahoo.ro

Abstract

The purpose of this study was to evaluate the effectiveness of screening methods applied in the analysis of plant products (cereal seeds, feed, hay, etc.) used in agriculture and animal husbandry. Their screening can be done both during the harvesting season as well as during their storage for the cold season. Information regarding the physico-chemical parameters and mycotoxicological load may be obtained by applying this rapid screening techniques. Near-infrared spectroscopy (NIRS) screening techniques can provide a quick result regarding the quality of plant products. In this study, the efficiency of using the Perten FT-NIR Analyzer in determining the physico-chemical parameters was tested. The sample were scanned and the values were provided shortly after. The analyzed products were also tested from a mycotoxicological point of view by identifying the presence of different types of mycotoxins in plant products by applying thin layer chromatography (TLC). The use of fast screening methods leads to lower costs, elimination of toxicity and shortening of the time to results.

Key words: screening, plant products, mycotoxins, NIRS, TLC.
