

# Food analytical and sampling conference of Codex Alimentarius Committee of WHO/FAO in Budapest

The Codex Alimentarius Commission was established by the Food and Agriculture Organization of the United Nations and the World Health Organization (WHO) in 1963. Documents and analytical standards developed by the Codex serve as the basis for regional and national food regulations, but they are not necessarily binding. At the same time, they provide great help in planning food compliance tests prior to international food transactions. Hungary has been an active participant in the work since 1963, and the annual sessions of the Codex Committee Measurement Analysis and Sampling (CCMAS) have been organized by Hungary since 1972. For the seventh year, WESSLING Hungary Kft., a company operating independent laboratories, has been co-organizer of the event, together with the National Food Chain Safety Office (NÉBIH).



One of the most important international conferences of the global food safety was organized by the National Food Chain Safety Office (NÉBIH) at the end of February. WESSLING Hungary Kft., a company operating independent laboratories, has been co-organizer of an analytical and sampling symposium, and gave the chairman of the Hungarian Working Group of CCMAS.

Among the topics of the Hungarian session of the probably most significant international conference on global food safety, a major role was intended for the fight against food counterfeiting, which was clearly supported by the CCMAS conference – said Dr. Tamás János Szigeti.

During the session, immunochemical methods for the determination of gluten were discussed in detail by the committee (Codex Committee Measurement Analysis and Sampling), among other things. When analyzing methods R5 and G12, reacting gluten at different epitopes, it was found that results obtained using the two methods were not comparable, therefore, further investigation of the analytical methods is necessary.

In the determination of the lower limits of quantification for the individual compounds, contradictions are caused by the fact that the upper limit value for aflatoxin B1 in most foodstuffs is 5 µg/kg, while the combined limit value for four important aflatoxin compounds (B1, B2, G1, G2) is 15 µg/kg. To resolve this

issue, according to the suggestions of the delegates, it would be advisable to take into consideration the specific toxicity of the individual compounds.

As has been the tradition over the years, a sampling and analytical symposium, a so-called “mini-conference” was again organized by NÉBIH and WESSLING during the conference, on the topic of the adequacy of foods. During the discussion that took place with the participation of British, German and American experts, the food safety related experience of the laboratory was presented by Tamás Szigeti. Based on the LD<sub>50</sub> values of aflatoxin B1, responsible for a significant portion of food-borne diseases, he highlighted that a quantity of 0.62 mg of it is sufficient to kill a pig. At the same time, aflatoxin M1 can cause severe health damages when present in cow’s milk, among other things.

Attention was also drawn by Tamás Szigeti to another two current and important analytical methods. One of them is a procedure that requires the HPLC-MS (high pressure liquid chromatography-mass spectrometry) technique, with the help of which residues of a rather “old”, but still widely used herbicide named glyphosate are determined by our laboratory (unfortunately, this compound can already be detected in the urine of the population of European cities, and it is suspected by experts to have several health damaging properties). The other method uses the MALDI-TOF-MS (Matrix-Assisted Laser Desorption Time-of-Flight Mass Spectrometry) technique, providing an opportunity to confirm the detection of pathogenic microorganisms, based on the characterization of microbial proteins.

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