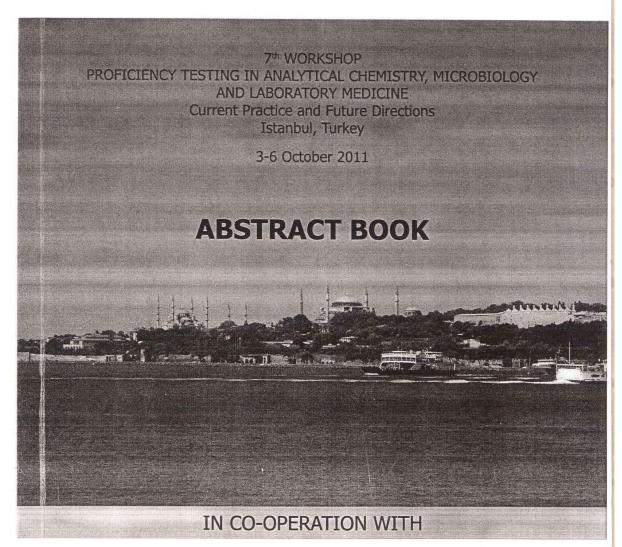
Eurachem

A focus for analytical chemistry in Europe







7th WORKSHOP
PROFICIENCY
TESTING IN
ANALYTICAL
CHEMISTRY,
MICROBIOLOGY
AND
LABORATORY
MEDICINE

Current Practice and Future Directions

Istanbul, Turkey 3-6 October 2011

17

Analysis of the Results Obtained for Proficiency Testing Schemes in Laboratories for Food Control in the Institute of Public Health, Skopje, FYROM

Vesna Kostik, Shaban Memeti, Toni Mickov, Evgenija Kiroska - Petreska

Institute of Public Health, Skopje, FYROM

Within the period of 9 years (2002 – 2010) in the laboratories for food testing in the Institute of Public Health, Skopje, FYROM, 32 different proficiency tests were performed in 23 different matrixes as: coffee cream, cream, powdered milk, yoghurt butter; oily dressing, cola drink, cabbage puree, fresh cheese, orange juice, potable water, water real sample, animal feed cereal based, fish oil, maize flour, corn flakes, minced canned fish, graham flour, synthetic food of vegetable and animal origin, homogenized canned fruit, powdered rice, dietetic product, fish soup and fresh fish.

A large number of parameters (73 in total) were analyzed which included fat content, dry matter, water content, benzoic acid, nitrate content, caffeine, saccharine, K – acesulfame., protein content, pH, citric acid, sugars, aflatoxins, trihalomethanes, organophosphorus insecticides, organochlorine insecticides, herbicides, metals and routine components in water.

A total of 203 measurements which were performed. The following results for Z score were obtained: 159 results had Z score $|Z| \le 2$ (78.33 %); 17 results had Z score 2 < |Z| < 3 (8.37 %) and 27 results had Z score $|Z| \ge 3$ (13.30 %).

Analysis of the possible sources of error for Z score 2 < |Z| < 3 have shown that it is due to random error during analysis. The highest values of Z scores were obtained for the analysis of fatty food (content of fat and dry matter). The best values of the Z score were obtained for the trace metals analysis and pesticides residues analysis. Providers for chemical testing of food and water were: Muva Kempten Quality Management & Laboratory Services; DRRR Deutsches Referenzbüro für Lebensmittel-Ringversuche und Referenzmaterialien; FAPAS and LEAP (UK) and The Swedish National Food Administration (NFA).