

May 2006

# codex alimentarius commission



FOOD AND AGRICULTURE  
ORGANIZATION  
OF THE UNITED NATIONS

WORLD  
HEALTH  
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JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX ALIMENTARIUS COMMISSION

*Twenty-ninth Session*

*International Conference Centre, Geneva (Switzerland), 3-7 July 2006*

## INFORMATION ON ACTIVITIES OF THE JOINT FAO/IAEA PROGRAMME ON NUCLEAR TECHNIQUES IN FOOD AND AGRICULTURE RELEVANT TO CODEX WORK

(Submitted by IAEA)

1. Since 1964, the Joint FAO/IAEA Division of Nuclear Techniques in Food and Agriculture has been in a unique position to promote the mandates of both FAO in its efforts to eliminate world hunger and poverty through sustainable agricultural development, improved nutrition and food security and the IAEA through peaceful uses of atomic energy to accelerate and expand the contributions of these technologies to health and prosperity worldwide.
2. The mission of the Joint FAO/IAEA Programme on Nuclear Techniques in Food and Agriculture is to strengthen capacities for the use of nuclear methods to improve technologies for sustainable food security and to disseminate these techniques through international activities in research, training and outreach in its Member States. The Joint FAO/IAEA Programme is subdivided into three major sub-programmes with activities related to crop production systems, livestock production systems and food and environmental protection. The FAO/IAEA Agriculture and Biotechnology Laboratory plays a key role in supporting the Joint FAO/IAEA Programme.
3. The Food and Environmental Protection Section of the Joint FAO/IAEA Division and the Agrochemicals Unit of the FAO/IAEA Agriculture and Biotechnology Laboratory comprise a sub-programme that provides food safety related assistance in four main areas, namely, coordinating and supporting research, providing technical and advisory services, providing laboratory support and training, and collecting, analyzing and disseminating information, primarily in areas related to the use of ionizing radiation, pesticide and veterinary drug residues and radioactive contamination of foodstuffs. Highlights of some of the activities of the Food and Environmental Protection sub-programme are as follows:

### **Validation of Thin-layer Chromatographic Methods for Pesticide Residue Analysis**

4. The IAEA Technical Document (IAEA-TECDOC Series No. 1462) was published in July 2005. The document gives a comprehensive overview of the practical application of thin-layer chromatography (TLC) in pesticide residue analysis. It includes the description of various techniques for the development of TLC plates and different modes of detection of the TLC spots. The results of participant research work and inter-laboratory collaboration are also summarized.

**Final Research Coordination Meeting of the Coordinated Research Project on the Use of Irradiation to Ensure the Safety and Quality of Prepared Meals (D6.20.07)**

5. The purpose of this final Research Coordination Meeting (RCM), which will be held in Beijing, China from 22-26 May 2006, is to evaluate research work done since the beginning of the Coordinated Research Project (CRP) and especially since the 2<sup>nd</sup> RCM held in Pretoria, South Africa in April 2004.
6. The contract and agreement holders have worked under this CRP on the microbiological, sensorial and nutritional quality of approximately thirty different prepared meals (mostly ethnic dishes) treated with irradiation. The investigators have been working closely with end users (food companies, catering services) in order to facilitate transfer of the technology.
7. The data generated under this CRP will be published as an IAEA Technical Document towards the end of 2006.

**Coordinated Research Project on Integrated Analytical Approaches to Assess Indicators of the Effectiveness of Pesticide Management Practices at a Catchment Scale (D5.20.35)**

8. The Agency, through its Joint FAO/IAEA Division, has initiated a coordinated research project (CRP) on *Integrated Analytical Approaches to Assess Indicators of the Effectiveness of Pesticide Management Practices at a Catchment Scale*. This CRP integrates risk assessment tools and targeted analytical monitoring as a cost-effective option for developing countries to identify specific water pollutants, their sources and occurrences. Nuclear and related techniques will assist in generating CRP outputs such as harmonized protocols for sampling and analysis of surface water.
9. Georeferenced data, guidelines, and access to eLearning courses will accelerate capacity building and lead to three major outcomes: (1) cost-effective, sustainable and catchment targeted monitoring schemes for surface water; (2) mechanisms to “feed back” the results of laboratory analysis to the primary producers community/extension services; and (3) information exchange on harmonized analytical methods and water monitoring schemes to improve pesticide management practices and the production of safe food whilst protecting the environment.
10. The first activity envisaged for the coordinated research project is a consultants’ meeting that will take place in Vienna from 6-9 June 2006. The meeting will consider the objectives of the CRP in elaborating protocols and activities to be undertaken during the CRP.

**Training Workshop on Introduction to Quality Assurance/Quality Control Measures in Pesticide Residue Analytical Laboratories**

11. The Food and Environmental Sub-programme, through its FAO/IAEA Training and Reference Centre for Food and Pesticide Control, is organizing a training workshop on *Introduction to Quality Assurance/Quality Control Measures in Pesticide Residue Analytical Laboratories* in Seibersdorf, Austria, from 11 September – 6 October 2006. The workshop is aimed at qualified analysts who are working in laboratories performing official control on behalf of their Governments. The objective is to introduce and discuss in detail the QA/QC principles relevant to pesticide residue analysis. Practical examples and hands-on training will be used to demonstrate the general requirements outlined in ISO/IEC Standard 17025 and the OECD Principles of Good Laboratory Practices (GLP). Detailed information can be found at <http://elearning.iaea.org/ATutor/bounce.php?course=73>. <http://elearning.iaea.org/ATutor/bounce.php?course=73>

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