5th European framework programme

Development of quantitative and qualitative molecular biological methods to identify plant and animal species in foods

LK1-2001-02373

MOLSPEC-ID

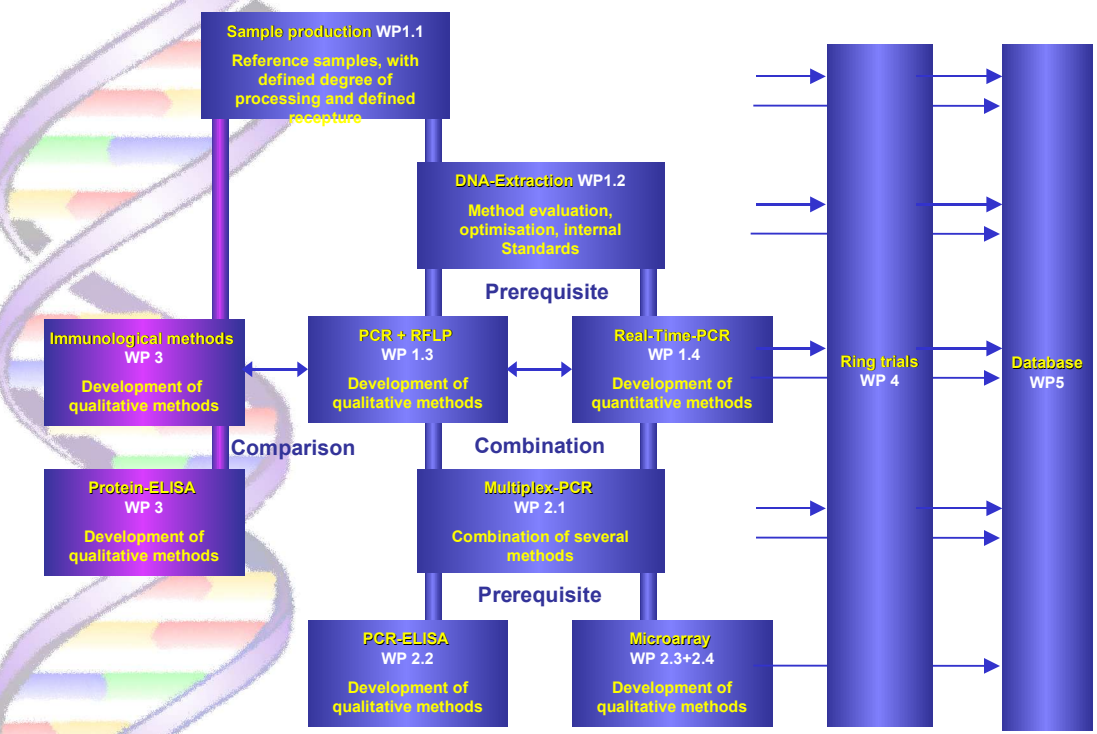
Summary

Recent investigations demonstrated that fraudulent replacement of food components as well as adverse reaction to unexpected food ingredients are quite common problems. Up to now official methods for the detection of plant and animal species in foods are exclusively based on protein analysis. The project aims to develop DNA-analytical methods for the identification and quantitation of plant and animal species in foods to monitor product safety and traceability. The methods are suitable for raw as well as highly processed food products usable during the production chain for tracking and tracing purposes.

Objectives

- ☐ PCR-based methods for the detection of animal and plant species in highly processed foods like tropical cans.
- ☐ Real-time-PCR methods for the relative quantification of animal and plant species in foods.
- ☐ Enhancing throughput by introducing multiplex-PCR, PCR-ELISA and chip technology.
- ☐ Comparison of nucleic acid-based methods with protein-based methods
- ☐ Method validation in single laboratory validation and in ring trials.
- ☐ Web-based database on species identification methods.

Project structure



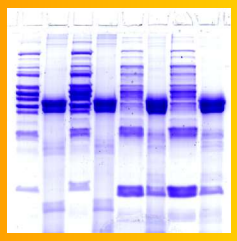
DNA-Extraction

CTAB- & Solid-Phase Extraction * Measurement of DNA Amount

PCR

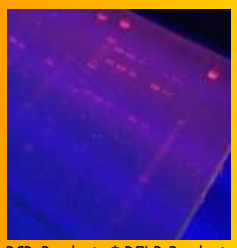
Universal-PCR * RAPD PCR * Species Specific PCR

Protein Detection



SDS-Page * Antibody Detection

Gel Electrophoresis

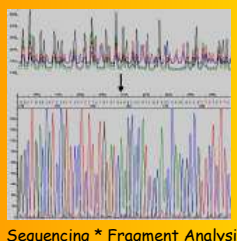


PCR-Products * RFLP-Products

Real-Time-PCR

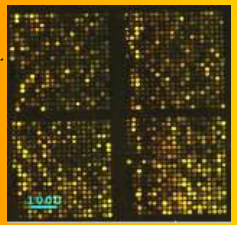
TaqMan™ probes * HybProbes™

Capillary Electrophoresis



Sequencing * Fragment Analysis

Micro Arrays



Micro Chips * Hybridisation Assay

Quality of Life and management of living resources

Project-ID:	**MolSpec-ID**
Contract number:	**QLK1-CT-2001-02373**
Contract type:	Shared Cost Project
Starting date:	**1.12.2001**
Duration:	**3 years**
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Project website:	**http://www.molspec.org**

A project in the 5th framework programme of the European Commission

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