

ENGL Working Group on Sample Preparation Procedure

ENGL – SPP WG

MANDATE

(as approved by ENGL SC in October 2010)

Proponents:

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Background

In the analytical chain, sample preparation procedure (SPP) is one of the three main steps involved in GMO detection. SPP is to be considered as the stage involving various techniques to transform, homogenize and reduce the laboratory sample in order to obtain a representative test portion.

In this context laboratory sample is the sample prepared for sending to the laboratory and test portion is the whole quantity to be analyzed (ISO 24276:2006).

Standards for GMO detection don't give any practical clues on how to operate the steps between the laboratory sample and the test portion in a probabilistic way so that the resulting test portion may statistically be considered as representative of the laboratory sample. According to the guidance in ISO standards 21571:2005 and 24276:2006, the laboratory sample must be homogeneous, the test portion must be representative of the laboratory sample and prevention procedures must be taken to avoid cross-contamination (premises, cleaning, dust...).

Mandate

The proposed mandate of WG SSP is writing a guidance document containing practical details for laboratory technicians in order to set up *ad hoc* guidelines and/or SOP for sample preparation procedure and internal validation approaches. In addition gaps and future needs will be identified such as:

- Evaluation of the correlation between particle size and extracted DNA quality and quantity.
- Comparison and evaluation of pros and cons derived from the use of different grinding devices.
- Evaluation of cross contamination problems.
- Comparison between slurry technique *versus* dry milling.
- Evaluation of practicability in terms of time of grinding operations, safety of operators and of working areas environmental issues.
- Evaluation of the weight of each of the above considered issues in order to analyze their contribution and identify the best sample preparation procedure.

Guidance on sample preparation strategies will be produced in light of practical experience deriving from ENGL laboratories, and scientific knowledge (relevant publications, reference documents as Codex alimentarius, ISO and CEN standards, legislative provisions at national, European and international level both in general and focused on GM product analysis).

Proposed Timeframe and Deliverables

Activity	Milestone	Deliverable
Meeting, for discussing and making proposals for a first draft and further steps.	February 2011 first WG-SPP meeting	Evaluation of reference documents and scientific publications
Presentation of the first draft of the Operative Guideline on sample preparation to ENGL members.	June 2011	First draft of Guideline on sample preparation
WG-SPP to meet, discuss comments raised, and make proposals for a consolidated new draft and further steps.	October 2011 second WG-SPP meeting	Consolidated new draft
WG-SPP to prepare a final version of the Document	January 2012	Final document

Whenever possible, the work will be done by e-mail exchange, two meetings are planned to deal with specific topics and to finalize the work in due time.