

GMO testing protocol ISO IWA 32

Technical Details and Impacts



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GMOs and Organic Agriculture



GMOs are not compatible with the principles and practice of organic production and processing and are therefore NOT PERMITTED within GOTS.

GM testing in Organic Cotton



- **Uncertainties existed in testing for the presence of GMOs in cotton.**
- **Testing of processed cotton was found unreliable.**
- **A standardised test protocol was not available.**
- **GOTS therefore initiated a Project to address this and looked for funders.**
- **Organic Cotton Accelerator (OCA) decided to fund an ISO International Workshop Agreement (IWA) for the purpose.**

ISO International Workshop Agreement (IWA): *what and why?*



ISO IWA

- ISO document produced through a (series of) workshop meeting(s) rather than through the full ISO technical committee process
- Market players and other stakeholders directly participate in developing an IWA and do not have to go through a national delegation

Credibility & visibility

ISO is a highly recognized international body, giving credibility and visibility to our reference document.

Transparency & consensus

Facilitation of the process is neutral and follows the basic principles of standardization: transparency, fairness and consensus

Multi-stakeholder representation

All relevant stakeholders can participate in the process, incl. laboratories, cotton and textiles industry players, government agencies and standard bodies

Quality & interoperability

Quality and interoperability are ensured as laboratories are used to working with ISO documents.

ISO IWA development: the project team



Project lead

RIKILT Wageningen University & Research

- National Reference Laboratory for GMOs in Food and Feed
- Member of the European Network of GMO Laboratories

Secretariat

NEN –Netherlands Standardization Institute

- NEN combines knowledge of (EU) legislation, standardization, certification and accreditation
- Dutch member body of ISO, meeting qualifications of ISO Directives

Chair

Dr. Sally Uren – Forum for the Future

- Chairing all online meetings and the International Workshop

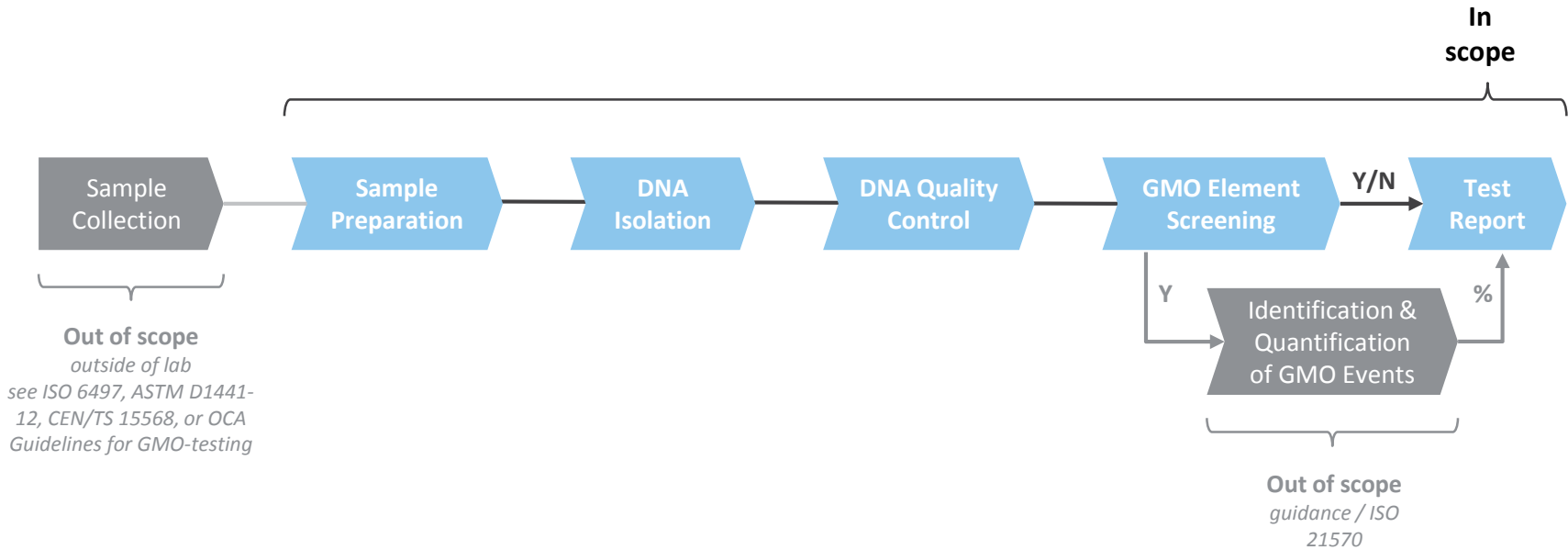
Participants

>80 people from 23 countries

- Representatives from cotton and textiles industry, laboratories, academia, standards and platforms, NGOs and foundations



Scope of the IWA protocol: qualitative screening



Scope and objectives of IWA 32:2019



The IWA 32 provides requirements and recommendations to laboratories that perform genetically modified organism (GMO) analyses in cottonseed, leaf, cotton fibre and cotton fibre-derived materials.

The following objectives are within the scope of this document:



A. identifying the materials to be assessed, based on the probability of obtaining good quality, fit for purpose DNA from the materials in subsequent steps in the cotton cloth production process;



B. specifying a method for efficient DNA isolation from cotton and cotton-derived materials described under point A);



C. specifying the cotton-specific method(s) to be used as control for amplifiable DNA



D. specifying the screening procedure that provides optimal chances to detect GMOs as a result of the performance of the lowest number of genetically modified (GM) element screening assays.

**ISO IWA 32 was published
April 2019**

**INTERNATIONAL
WORKSHOP
AGREEMENT**

**IWA
32**

First edition
2019-04

**Available for purchase on the
ISO website :**

**[https://www.iso.org/standard/
76418.html](https://www.iso.org/standard/76418.html)**

**Screening of genetically modified
organisms (GMOs) in cotton and
textiles**

*Criblage pour la détection des organismes génétiquement modifiés
(OGM) dans le coton et les textiles*

ISO IWA 32 – Salient points



- **Testing is feasible only on unprocessed cotton** (raw fibre / grey yarn / fabric that has not been chemically processed)
- **Detailed test protocol is given.**
- **Quantification has not been studied.**

GOTS advisory to Certification Bodies



- **GOTS requires mandatory seed cotton testing for GMO presence at all GOTS certified gins.**
 - ISO 1130:1975 must be used for sampling of the seed cotton.
 - Testing protocol to be followed is ISO IWA 32:2019.
 - In case of a positive result on seed cotton, CBs will follow the protocol outlined within the advisory.
- **GOTS no longer recommends testing on chemically processed cotton materials.**

Further requirement : Farm TCs.



- Towards strengthening integrity and traceability, **GOTS requires that the Farm Transaction Certificate number / SC number appears on the first GOTS TC at the gin.**
- **The GOTS Transaction Certificate policy and format will be revised to reflect this.**
- **In view of the harmonisation policy of GOTS and Textile Exchange, the changes in Transaction Certificate policy and format will also be adopted by Textile Exchange.**

How do CBs deal with a positive test result?



- **CBs must conduct an investigation to assess the source of the GMO detected** (i.e. contaminated seed, intentional or inadvertent contamination, system breakdown).
- **If the detection is because of the intentional and/or technically avoidable use of GMOs, the lint cotton must not be accepted into the GOTS system and rejected.**

Detection (contd).



- **GOTS certification is process-based, and whilst GOTS expects all reasonable steps to be taken to eliminate GMOs from textile supply chains, we agree that farmers and operators should not be penalised due to factors outside of their control.**
- If detection is found to be due to a systemic breakdown because of inadequate co-mingling or contamination prevention measures, certifiers should issue a non-compliance to the GOTS certified operator, requiring a corrective action(s) for the operator to implement intervention improvements to avoid the presence of GMOs in the future.

Advisory implementation



- **3 months from 26 June 2019** (26 September 2019)
- **Must cover the new cotton crop from 2019.**

Testing Laboratories for ISO IWA 32



- **As is GOTS policy on laboratories :**
 - **All laboratories who have ISO 17025 / GLP accreditation with this specific test protocol under their scope of accreditation.**

Impact and Effect



- **A standardized testing protocol for the industry**
- **No more uncertainty in results**
- **Buyers, Brands, Retailers, Customers can be assured of GMO-free (cotton) organic products**

Thank you !



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