



Technical Specifications

# MI5.4 - GMO controlled

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# Index

<b>INTRODUCTION</b> .....	<b>4</b>
REGULATIONS (EC) NO. 1829/2003 AND 1830/2003 .....	4
VERBAND LEBENSMITTEL OHNE GENTECHNIK (VLOG) .....	4
<b>1. SCOPE OF THIS DOCUMENT</b> .....	<b>5</b>
<b>2. NORMATIVE REFERENCES</b> .....	<b>6</b>
2.1. HOW TO READ THIS DOCUMENT .....	6
<b>3. TERMS AND DEFINITIONS</b> .....	<b>7</b>
<b>4. GMO CONTROLLED</b> .....	<b>8</b>
4.1. FEED RESPONSIBILITY MANAGEMENT SYSTEM .....	8
4.1.1. DETERMINING THE SCOPE OF THE FEED RESPONSIBILITY MANAGEMENT SYSTEM .....	8
4.2. PREREQUISITE PROGRAMMES (PRPS) .....	8
4.2.1. PEOPLE .....	8
4.2.2. TRACEABILITY SYSTEM .....	8
4.3. RISK ASSESSMENT .....	8
4.3.1. ADDITIONAL REQUIREMENTS FOR TRADE .....	8
4.3.2. ADDITIONAL REQUIREMENTS FOR PRODUCTION .....	9
4.4. PURCHASE .....	10
4.4.1. SELECTION OF SUPPLIERS .....	10
4.4.2. VERIFICATION OF INCOMING PRODUCTS AND/OR SERVICES .....	13
4.5. INFORMING THE CUSTOMER .....	13
4.5.1. INFORM THE CUSTOMER ABOUT THE STATUS OF THE FEED .....	13
4.6. VERIFICATION .....	14
4.7. COMMUNICATION .....	14
4.8. CRISIS MANAGMENT .....	14
<b>5. SUPPLY CHAIN MODELS</b> .....	<b>15</b>
5.1. SEGREGATION .....	15
<b>6. SAMPLING AND TESTING</b> .....	<b>16</b>
6.1. GENERAL .....	16
6.2. MONITORING PLAN .....	16
6.2.1. FEED IN WHICH GENETIC MODIFICATION CANNOT BE DETECTED .....	16
6.2.2. FEED IN WHICH GENETIC MODIFICATION CAN BE DETECTED .....	16
6.3. EVALUATION OF TEST RESULTS AND MEASURES TO BE TAKEN .....	18
6.3.1. GENERAL .....	18
6.3.2. HANDLING POSITIVE TEST RESULTS .....	18

<b>APPENDIX 1 SAMPLING AND TESTING .....</b>	<b>20</b>
<b>APPENDIX 2 INFORMING SUPPLIER AND CUSTOMER .....</b>	<b>23</b>

## Introduction

As a result to the market demand for non-GMO feed within the European Union (EU) GMP+ International has created MI 5.4 *GMO controlled*. This in order to facilitate feed companies to comply with the demands of the market initiative VLOG.

Consumer perception plays an important role in the demand for non-GMO food (and feed). At present many (inter)national non-GMO standards are applied in the feed sector. The German VLOG standard has set a standard for the food and feed sector inside the EU. Therefore, GMP+ International has chosen to collaborate with VLOG to be able to facilitate the demand especially in Europe.

Legislation has been published in various countries, including Germany and France, to label products from animal origin (meat / milk / egg) as non-GMO. Such labelling also means that specific requirements are imposed on the chain upstream, including the animal feed industry. Conditions relating to the production of non-GMO food from animal origin require the use of GMO controlled feed. To provide animal feed suppliers with the opportunity to supply GMO controlled feed to farmers who deliver non-GMO end-products (meat / milk / egg) to markets where legislation allows such labelling, MI 5.4 *GMO controlled* was developed.

## Regulations (EC) No. 1829/2003 and 1830/2003

The VLOG Standard is based on the GMO labelling provisions of [Regulations \(EC\) 1829/2003](#) and [1830/2003](#). Contamination with GMOs permitted in the EU by law does not require labelling according to [Regulations \(EC\) No. 1829/2003](#) and No. [1830/2003](#) provided that two requirements are fulfilled:

- The threshold value of the GMO content of 0.9% per feed material is not exceeded and
- The presence of the GMO content is "adventitious or technically unavoidable".

Contamination with approved GMO content < 0.1% are generally considered as technically unavoidable or adventitious. Contamination present in quantities from 0.1% to 0.9% is considered as labelling-compliant if the business has installed and demonstrably implemented organisational measures to avoid introduction of GMO material.

## Verband Lebensmittel ohne Gentechnik (VLOG)

VLOG - Verband Lebensmittel ohne Gentechnik (VLOG) provides a non-GMO standard which includes requirements for the production of products from animal origin without the use of GMO feed ingredients. The VLOG standard supports production facilities in the implementation of the German legal requirements of non-GMO labelling and establishes uniform inspections for certification companies. It is based on the German EC Engineering Act (EG-GentDurchfG) and on "BVL-Guideline for Monitoring GMOs in Feed", version 3 as of 15 July 2021 (Feed Guideline). GMP+ International worked together with VLOG on MI 5.4 *GMO controlled*. The current MI 5.4 *GMO Controlled* is based on the VLOG – 'Ohne Gentechnik' Production and Certification Standard version 25.01.

# 1. Scope of this document

The requirements to produce, store, transport and/or trade GMO controlled feed that is in compliance with the requirements as defined by VLOG are included in this document.

## 2. Normative references

This Market Initiative (MI) document holds the responsible feed and feed services requirements. This MI document must always be used in combination with the R5.0 *Feed Responsibility Management Systems Requirements* which ensures the implementation of a Feed Responsibility Management System (FRMS). The combined use enables a company to provide responsible feed products and feed services in accordance to the request from the Market Initiative.

Both the R5.0 *Feed Responsibility Management Systems Requirements* and the Market Initiative documents must be considered as a normative part of the GMP+ FRA module.

This document is to be used:

- a. in addition to the GMP+ FSA module;
- b. in combination with an equivalent feed safety standard (see TS1.2 *Purchase*)

Storage and transshipment companies and transport companies can only use MI 5.4 *GMO controlled* and R5.0 *Feed Responsibility Management Systems Requirements* in combination with GMP+ FSA certification for the scopes storage and transshipment and transport respectively.

### 2.1. How to read this document

MI 5.4 *GMO controlled* gives only additional requirements to the requirements of R5.0 *Feed Responsibility Management Systems Requirements*. These requirements are relevant for the scope of MI 5.4 *GMO controlled*.

The structure of MI 5.4 *GMO controlled* follows the same structure as R5.0 *Feed Responsibility Management Systems Requirements*. Only when there is an additional requirement to a certain paragraph of R5.0 *Feed Responsibility Management Systems Requirements*, this is added in MI 5.4 *GMO controlled*. For convenience, the numbering and names of the paragraphs of MI 5.4 *GMO controlled* correspond as much as possible with the relevant paragraphs in R5.0 *Feed Responsibility Management Systems Requirements*. These additional requirements are extracted from the VLOG standard.

### 3. Terms and Definitions

In addition to the terms and definitions mentioned in F0.2 *Definition list* the following terms are used:

Term	Description
At risk feed	Feed which, based on the certified company's risk assessment, has an increased risk of GMO content.
Feed exempt from mandatory labelling	Feed which, according to <a href="#">Regulations (EC) No. 1829/2003</a> or <a href="#">1830/2003</a> , is not subject mandatory labelling as genetically modified.
Feed subject to mandatory labelling	Feed which, according to <a href="#">Regulations (EC) No. 1829/2003</a> or <a href="#">1830/2003</a> , has to be labelled as genetically modified.
GMOs	Genetically modified organisms; according to <a href="#">Regulation (EC) No. 2001/18</a> these are organisms in which the genetic material has been modified by means of molecular biological methods in a way that naturally is not possible by interbreeding and/or recombination.
GMO controlled feed	Feed which is produced, stored, traded and/or transported in compliance with the requirements of GMP+ MI 5.4 <i>GMO controlled</i> .
Mobile grinding and mixing facilities	Production of feed using mobile equipment. This mobile equipment is used on the location of the livestock farmer to mix and/or grind different types of feed.
Model	Vehicle type of a mobile grinding and mixing facility (equipment) of the company.
Noncompliant products	Feed which is subject to mandatory labelling according to <a href="#">Regulations (EC) No. 1829/2003</a> or <a href="#">1830/2003</a> .

## 4. GMO controlled

### 4.1. Feed Responsibility Management System

In addition to the requirements in this document, the certified company must also meet the requirements mentioned in R5.0 *Feed Responsibility Management Systems Requirements*.

#### 4.1.1. Determining the scope of the Feed Responsibility Management System

The certified company determines and documents which feed materials, feed additives, premixtures and/or compound feed are covered within the scope of the management system.

 **Helpful tip:**

R5.0 *Feed Responsibility Management Systems Requirements* requires a supply chain model to be included in documentation. This is not applicable as segregation is the only supply chain model that can be used in MI 5.4 GMO controlled.

### 4.2. Prerequisite programmes (PRPs)

These requirements are in addition to R5.0 *Feed Responsibility Management Systems Requirements*.

#### 4.2.1. People

The certified company performs a relevant training at least once a year and in any case before the relevant employee starts with the activities which may have an impact on the GMO controlled feed.

#### 4.2.2. Traceability system

The certified company has a written recall procedure which can be used within the framework of handling positive results and complaints.

### 4.3. Risk assessment

These requirements are in addition to R5.0 *Feed Responsibility Management Systems Requirements*.

#### 4.3.1. Additional requirements for trade

Buying feed materials from a non-certified supplier and selling this as GMO controlled feed material, is only allowed in case genetic modification can be technically detected in the feed material through PCR tests. In that case the certified company must also comply with the requirements in § 4.3.2.

 **Helpful tip:**

The VLOG document "Suitability of GMO Analysis for Feed, Raw Materials and Food" is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard>) under



“Feed Manufacturing, Logistics and Matrix Organisation/Further Documents/Instructions/Tools”) to assist the feed business. This document gives an overview of feed materials in which GMOs can and cannot be tested by means of PCR tests. If GMOs are not detectable in a feed material, the feed material does not have to be tested on GMOs. In case of doubt about the absence of GMOs in a feed material, one could ask for test results by the supplier of the raw material (no requirement). This information can be used for making the risk assessment (see § 4.3.2 below).

### 4.3.2. Additional requirements for production

The certified company is required to make an individual, batch-specific risk assessment of risk/not at risk feed materials, which are used within the scope of GMO controlled feed.

#### + Helpful tip:

To assist with the risk grading of feed, an “Assessment Aid – At Risk Feed” is available on the VLOG website: (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard> under ‘Feed Manufacturing, Logistics and Matrix Organisation/Further Documents/Instructions/Tools’) to assist the feed business. This document includes a table which provides an overview of where growing genetically modified plants is allowed and thus possible at-risk feed origin.

#### + Helpful tip:

According to the VLOG standard livestock farmers are required to classify feed containing the following feed materials as “at risk”: soya, corn\*, rape seed and cotton. Sugar beet is to be considered as “at risk” under specific circumstances. These circumstances are explained in “Part E: Agriculture” (Chapter E § 4.2) of the VLOG Ohne Gentechnik standard, available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard> (most recent version)).

*\*Dried corn can be considered as not ‘at risk’ when coming from specific regions. These specific regions are described in Part E: Agriculture(Chapter E § 4.2) of the VLOG – Ohne Gentechnik standard available on the VLOG homepage <https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard> (most recent version).*

#### 4.3.2.1. Carryover test

If feed (including oils) requiring mandatory labelling is ground/mixed, the company must perform a carryover test for each identical model used to ensure the effectiveness of the measures preventing carryover.

If there are several technically identical models available in the facility, the carryover test must be conducted on the model with the highest risk of carryover. The results of the carryover test must be documented and retained at least until the next test. Where necessary, appropriate corrective actions must be implemented based on test results.

Grinding and/or mixing facilities are exempt from carryover testing, if there is a complete discharge and a system purge in accordance with the manufacturer’s instructions (or based on the company’s own test results) after every mixing involving feed that is subject to mandatory labelling and before any “GMO Controlled” feed.

#### + Helpful tip:

The facility with the highest risk of carryover can be determined by for example the age or type/extent of repairs.

a. Carryover test prior to initial audit:

Prior to the initial audit a carryover test must be carried out by the company. The carry over test can be neglected if a detailed system report from the manufacturer is available.

 Helpful tip:

Examples of a detailed system report from the manufacturer are complete discharge, use of a hammer mill, system purge of a certain size/quality, etc.

b. Carryover tests in subsequent years:

For the subsequent years, the carryover test must be performed at least every five calendar years or when there are material changes to the facility which can affect the carryover.

 Helpful tip:

Examples of material changes to the facility are repairs, wear and tear, or defects.

## 4.4. Purchase

These requirements are in addition to R5.0 *Feed Responsibility Management Systems Requirements*.

### 4.4.1. Selection of suppliers

The certified company must purchase feed and/or services from a supplier according to the below specifications:

Purchase of	Accepted certificates:	Additional requirements
Compound feed	GMP+ GMO controlled	The activity production or trade of compound feed must be included in the scope of the certificate of the supplier.
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	OQUALIM-STNO Technical Platform "GMO-free feed"	
	Certificates accepted by VLOG as equivalent	
	In case the compound feeds are used (by the certified company) as an ingredient for the production of feed, it is allowed to select a supplier that is not certified for the above mentioned accepted certificates.	As long as the certified company has a confirmation from the supplier of the GMO-free status of the purchased compound feeds and complies with the requirements in this standard (focus especially on monitoring requirements).
Premixtures	GMP+ GMO controlled	The activity production or trade of premixtures must be included in the scope of the certificate of the supplier.
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	Certificates accepted by VLOG as equivalent	

	In case the premixtures are used (by the certified company) as an ingredient for the production of feed, it is allowed to select a supplier that is not certified for the above mentioned accepted certificates.	As long as the certified company has a confirmation from the supplier of the GMO-free status of the purchased premixtures and complies with the requirements in this standard (focus especially on monitoring requirements).
Feed additives	GMP+ GMO controlled	The activity production or trade of feed additives must be included in the scope of the certificate of the supplier.
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	Certificates accepted by VLOG as equivalent	
	In case the feed additives are used (by the certified company) as an ingredient for the production of feed, it is allowed to select a supplier that is not certified for the above mentioned accepted certificates.	As long as the certified company has a confirmation from the supplier of the GMO-free status of the purchased feed and complies with the requirements in this standard (focus especially on monitoring requirements)
Feed Material	GMP+ GMO controlled	The activity production or trade of feed materials must be included in the scope of the certificate of the supplier.
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	OQUALIM-STNO Technical Platform "GMO-free feed"	
	Certificates accepted by VLOG as equivalent	
	It is allowed to select a supplier that is not certified for the above mentioned accepted certificates. Note: buying a feed materials from a non-certified supplier and selling/using this as GMO controlled feed material is only allowed in case genetic modification can be technically detected in the feed material through PCR tests. (see § 4.3.2)	As long as the certified company has a written confirmation from the supplier of the GMO-free status of the purchased feed and complies with the requirements in this standard (focus especially on monitoring requirements). In case of trade of feed materials: no later than at the conclusion of a purchase agreement, the certified company must have a written confirmation from the supplier that the goods are not subject to compulsory GMO labelling (which must be batch-specific or for a specific period of time),
Storage and Transshipment	GMP+ GMO controlled	The activity storage and transshipment must be included in the scope of the certificate of the supplier.
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	Certificates accepted by VLOG as equivalent	
	In case it concerns storage and transshipment of <u>packaged and clearly labelled</u> GMO controlled feed, it is allowed to select a	

	supplier that is not certified for the above mentioned accepted certificates.	
Transport	GMP+ GMO controlled	The activity transport must be included in the scope of the certificate of the supplier.
	GMP+ B4 Transport / TS1.9 <i>Transport activities</i>	
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	
	Certificates accepted by VLOG as equivalent	
	As an exception to the requirement that suppliers must be selected with an accepted certificate, it is allowed to select a supplier who has no accepted certificate.	The purchase of transport must comply with the requirements as stated in TS1.2 <i>Purchase</i> .
	In case it concerns transport of <u>packaged</u> GMO controlled feed, it is allowed to select a supplier that is not certified for the above mentioned accepted certificates.	
Production or processing on contract basis (including private labelling, mobile grinding and mixing facilities)	GMP+ GMO controlled	The activity production of feed must be included in the scope of the certificate of the supplier.
	OQUALIM-STNO Technical Platform "GMO-free feed"	
	VLOG – 'Ohne Gentechnik' Production and Certification Standard	QQUALIM-STNO Technical Platform "GMO-free feed" is only accepted for the production of compound feed and feed material.
	Certificates accepted by VLOG as equivalent	

 **Helpful tip:**

The standards, which VLOG has recognized as equivalent to the VLOG – Ohne Gentechnik standard are available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard>) under 'General and Certification/Further Documents/Instructions/Tools'.

 **Helpful tip:**

Feed can only be labelled and sold as GMO controlled feed by a company/location that is certified in compliance with the requirements in this standard.

 **Helpful tip:**

The certifications referred to in the above table are purely aimed at assuring the GMO controlled status of the feed. If the GMP+ certified company uses this certification in combination with a feed safety certification (such as the GMP+ FSA module), the company must of course also follow the purchasing requirements which apply for that feed safety certification.

#### 4.4.2. Verification of incoming products and/or services

In case of outsourcing activities to third parties (for example subcontracts for storage, transport or other services), the certified company:

- a. ensures that this activity is purchased in compliance with the purchasing requirements in [§ 4.4.1](#) and;
- b. provides the third party with written instructions to ensure compliance with the requirements in this document.

##### 4.4.2.1. Additional requirements for incoming products to be used for production

For each feed classified as 'at risk' in the risk assessment, a confirmation of the non-GMO status from the supplier is required. This may be done by one or more of the following examples:

- a. a valid certificate in accordance with MI 5.4 *GMO controlled* (or equivalent) together with a declaration about the non-GMO status of the batch/lot being delivered;
- b. a test result according to the requirements of MI 5.4 *GMO controlled* (or equivalent) proving the non-GMO status of the batch/lot being delivered;
- c. an additional indication on the delivery slip declaring the products to be exempt from mandatory labelling;
- d. a clear contractual agreement regarding the delivery of feed exempt from mandatory labelling.

For each feed classified as 'not at risk' in the risk assessment, it must be documented in writing that they are not subject to mandatory labelling obligations.

#### ⊕ Helpful tip:

The certified company should verify that the incoming goods are exempt from mandatory labelling in accordance with [Regulations \(EC\) 1829/2003](#) and [1830/2003](#).

#### ⊕ Helpful tip:

Compound feed producers may apply the above mentioned requirements for their trading activities.

#### ⊕ Helpful tip:

For the definition of "feed" please refer to the F0.2 Definition List.

## 4.5. Informing the customer

These requirements are in addition to R5.0 *Feed Responsibility Management Systems Requirements*.

### 4.5.1. Inform the customer about the status of the feed

#### ⊕ Helpful tip:

An additional option for the certified company to demonstrably inform about the status of the feed is by using the wording “GMO controlled” for the feed materials and/or compound feed assured under his Feed Responsibility Management System.

*Note: According to the VLOG standard livestock farmers demand a statement from their feed suppliers about the non-GMO status of the feed they receive.*

The system must ensure that feed materials and/or compound feed which are subject to mandatory labelling are labelled in accordance with [Regulations \(EC\) 1829/2003](#) or [1830/2003](#).

*Note: For the use of logo's and trademarks, see F0.1 Rights and Obligations.*

 **Helpful tip:**

The BVL document “BVL-Guideline for Monitoring GMOs in Feed” version 3 as of 15 July 2021 (Feed Guideline) gives examples of situations where mandatory labelling is required or not. This guideline is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard>) under ‘General and Certification/Further Documents/Instructions/Tools’) to assist the feed business.

## 4.6. Verification

The company is required to comply with the R5.0 *Feed Responsibility Management Systems Requirements*.

## 4.7. Communication

The company is required to comply with the R5.0 *Feed Responsibility Management Systems Requirements*.

## 4.8. Crisis management

The company is required to comply with the R5.0 *Feed Responsibility Management Systems Requirements*.

 **Helpful tip:**

Measures to be taken as a result of the complaint may include the labelling and blocking of products.

## 5. Supply chain models

These requirements are in addition to R 5.0 Feed Responsibility Management Systems Requirements.

 Helpful tip:

Only § 5.2.1 and § 5.2.2 of R 5.0 Feed Responsibility Management Systems Requirements are relevant and can be applied for the scope of MI 5.4 *GMO controlled*.

### 5.1. Segregation

Vehicles must be demonstrably dry cleaned after transporting bulk raw materials or feed labelled as genetically modified pursuant to [Regulations \(EC\) No. 1829/2003](#) and [1830/2003](#).

 Helpful tip:

This requirement for cleaning after transport of agricultural products is already included in the GMP+ FSA certification.

## 6. Sampling and Testing

### 6.1. General

Sampling is done in compliance with relevant EU legislation and/or already accepted sampling standards.

 **Helpful tip:**

Accepted sampling standards are for example GAFTA and FOSFA.

### 6.2. Monitoring plan

#### 6.2.1. Feed in which genetic modification cannot be detected

If the certified company only uses feed in which, due to technical limitations, genetic modification cannot be detected through PCR tests, no sampling/GMO test is necessary. This must be concluded from the risk assessment.

 **Helpful tip:**

The VLOG document "Suitability of GMO Analysis for Feed, Raw Materials and Food" explains which in products GMOs can and cannot be detected. This document is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard> under 'Feed Manufacturing, Logistics and Matrix Organisation/Further Documents/Instructions/Tools').

#### 6.2.2. Feed in which genetic modification can be detected

The certified company must have a monitoring plan that describes the sampling and testing procedure. This plan must be carried once a year.

The monitoring plan must at least contain:

- a. requirements to sample takers;
- b. sampling method:
  1. product to be sampled;
  2. place of sampling;
  3. method of taking aggregate samples and retained samples;
  4. sample size and number of samples;
  5. sealing and identification;
- c. storage duration of samples;
- d. documentation of samples;
- e. sampling frequency;
- f. name of the VLOG-recognized laboratory to be used for testing.

##### 6.2.2.1. Requirements to sample takers

The sample taker complies with the requirements for samplers as laid down in TS1.6 *Sampling*.



### 6.2.2.2. Storage duration of samples

The storage duration of samples matches the use and shelf life of the sampled product.

### 6.2.2.3. Sampling and Testing frequency

The frequency of sampling and testing is based on the certified company's individual risk assessment and is in compliance with the requirements in [Annex 1](#). For each outgoing batch, at least one sample is taken and retained.

A trader may make use of representative samples and testing results from the producer (supplier).

Each final sample is tested.

Second or third analyses of the sampled batch are permitted. See [§ 6.3](#) in case two test results with different conclusions are obtained for a single sample.

#### Helpful tip:

The auditor is authorized to take additional samples and/or carry out additional GMO tests on a risk-targeted basis or in suspicious cases.

### 6.2.2.4. Sample preparation and Analysis

Depending on the sample matrix, the following minimum amounts of sample material are to be taken for:

- a. Compound feed: min. 400 g, max. 1 kg,
- b. Feed materials and raw materials
  - b.Whole: at least 3000 kernels or approx. the respectively corresponding sample amount (maize/corn at least 1000 g; soy at least 700 g, rapeseed/canola at least 60 g).
  - b.Ground: at least 400 g, maximum 1kg

#### Helpful tip:

The sample size as required in MI 5.4 GMO controlled is larger than the sample size as required under GMP+ FSA certification as stated in TS1.6 *Sampling*.

The testing on GMOs is carried out by a laboratory recognized by VLOG.

#### Helpful tip:

The list of VLOG-recognized laboratories is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-test-laboratories/recognised-laboratories>).

When commissioning a laboratory, the following information must be indicated in the order or other documents having similar effect, and submitted to the laboratory:

- a. order of VLOG test (GMO tests) according to the VLOG requirements for laboratories as stated in the guideline for VLOG-recognition of laboratories;

b. composition of the sample.

If containing soy, maize/corn, rapeseed/canola and/or rice feed material or ingredients, it must be indicated in what form these are contained (e.g. maize/corn as maize/corn mash, soy as soy extraction meal) and the composition of the compound feed.

 Helpful tip:

The 'Guideline for Laboratories and GMO Testing is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard>) under 'Feed Manufacturing, Logistics and Matrix Organisation/Further Documents/Instructions/Tools'. Annex 1 of this guideline specifies which GMOs are included in the GMO analyses carried out by VLOG-recognized laboratories.

## 6.3. Evaluation of test results and measures to be taken

### 6.3.1. General

If two test results with different conclusions are obtained for a single sample, the following procedure is to be undertaken, resulting in a final finding:

- a. if the results overlap, taking into account the expanded measurement uncertainty, the average value of the two test results is used;
- b. if the results do not overlap, taking into account the expanded measurement uncertainty, a third test of the batch is ordered.

The internal auditor examines whether the test results were evaluated correctly and any necessary (corrective) measures were properly implemented.

 Helpful tip:

The BVL document "BVL-Guideline for Monitoring GMOs in Feed" version 3 as of 15 July 2021 (Feed Guideline) can be helpful when interpreting the analysis results. This guideline is available on the VLOG homepage (<https://www.ohnegentechnik.org/en/for-businesses/standards/the-vlog-standard>) under 'General and Certification/Further Documents/Instructions/Tools') to assist the feed business.

In the event of inaccurately labelled feed placed on the market, the customers and Certification Body must be notified with at least the information as mentioned in [Appendix 2](#).

### 6.3.2. Handling positive test results

The certified company must establish a system for handling positive test results. This must include appropriate measures like the labelling/blocking of noncompliant products and a recall procedure.

The customer is informed (on request) periodically about positive test results related to the delivered batches and receives a summary or overview of the results.

Positive test results must be handled in accordance with the table below.

GMO test result	Evaluation	Measures to be taken
GMO not verifiable or < 0.1% GMO	<ul style="list-style-type: none"> <li>• Feed exempt from mandatory labelling</li> <li>• Allowed to be used as or in GMO Controlled feed</li> </ul>	No measures needed
≥ 0.1% ≤ 0.9% GMO	<ul style="list-style-type: none"> <li>• Feed exempt from mandatory labelling</li> <li>• Case-by-case evaluation required</li> </ul>	<p>The GMP+ certified company must:</p> <ul style="list-style-type: none"> <li>• investigate the source of the contamination;</li> <li>• take measures to remove or limit the source of the contamination;</li> <li>• inform the supplier(s), if relevant, with at least the information as mentioned in <a href="#">Appendix 2</a>;</li> <li>• review the effectiveness of the measures taken, and</li> <li>• keep the evidence of the measures taken as documented information.</li> </ul>
> 0.9% GMO	<ul style="list-style-type: none"> <li>• Feed subject to mandatory labelling</li> <li>• Not allowed to be used as or in GMO Controlled feed</li> </ul>	<p>The GMP+ certified company must:</p> <ul style="list-style-type: none"> <li>• inform customer(s) and if relevant supplier(s) with at least the information as mentioned in <a href="#">Appendix 2</a>;</li> <li>• block and recall the feed;</li> <li>• investigate the source of the contamination;</li> <li>• take measures to remove or limit the source of the contamination; and</li> <li>• keep the evidence of the measures taken as documented information.</li> </ul>

## Appendix 1 Sampling and Testing

The tables below specify the sampling and testing frequency for GMO controlled feed materials, feed additives, premixtures and compound feed. The sampling and testing frequency applies only to the products that fall under the scope of this standard.

The sampling and testing frequency is calculated based on 88% dry matter content.

The sampling and testing frequency is to be implemented by certified companies producing and/or trading GMO controlled feed materials, feed additives, premixtures and/or compound feed.

### 1. Producing companies

The table below provides the sampling and testing frequency for certified companies producing GMO controlled feed material, feed additives, premixtures and compound feed.

	Incoming goods	Outgoing goods
<b>Production activity on location certified company</b>	<ul style="list-style-type: none"> <li>- Feed material</li> <li>- Feed additive</li> <li>- Premixture</li> </ul>	<ul style="list-style-type: none"> <li>- GMO controlled feed materials*</li> <li>- GMO controlled feed additive</li> <li>- GMO controlled premixture</li> <li>- GMO controlled compound feed</li> </ul>
<b>Production completely exempt from mandatory labelling</b>	1 sample & test of every batch of at risk feed materials, feed additive, premixture	<ul style="list-style-type: none"> <li>&lt; 10,000 t/year: 1 sample &amp; test</li> <li>≥ 10,000 to 50,000 t/year: 2 samples &amp; tests</li> <li>≥ 50,000 to 100,000 t/year: 4 samples &amp; tests</li> <li>≥ 100,000 to 200,000 t/year: 6 samples &amp; tests</li> <li>≥ 200,000 to 300,000 t/year: 8 samples &amp; tests</li> <li>For every additional 100,000t (or part thereof)/year: 2 additional samples &amp; tests</li> </ul>
<b>Production of GMO controlled feed and non-GMO controlled feed subject to mandatory labelling</b>	1 sample & test of every batch of at risk feed materials, feed additive, premixture	<ul style="list-style-type: none"> <li>&lt; 2,000 t/year: 1 sample &amp; test</li> <li>≥ 2,000 to 5,000 t/year: 3 samples &amp; tests</li> <li>≥ 5,000 to 10,000 t/year: 5 samples &amp; tests</li> <li>≥ 10,000 to 50,000 t/year: 10 samples &amp; tests</li> <li>≥ 50,000 to 100,000 t/year: 15 samples &amp; tests</li> <li>≥ 100,000 to 200,000 t/year: 20 samples &amp; tests</li> <li>≥ 200,000 to 300,000 t/year: 25 samples &amp; tests</li> <li>For every additional 100,000 t (or part thereof) /year: 5 additional samples &amp; tests.</li> </ul>

\* Certified companies who only produce feed materials not subject to mandatory labelling can dispense with sampling of the outgoing feed materials if corresponding test was performed on the incoming goods.

### 2A. Trading companies

The table below provides the sampling and testing frequency for certified companies trading GMO controlled feed.

	GMO controlled feed present on location certified company	
	Bulk	Packaged

Products present on location certified company and/or subcontracted storage location	Minimum number of samples & tests for <u>outgoing</u> feed a year	
Only bulk GMO controlled feed	< 10,000 t/year: 1 sample & test	No (additional) sampling and testing
Bulk GMO controlled feed <u>and</u> bulk feed exempt from mandatory labelling	≥ 10,000 to 50,000 t/year: 2 samples & tests ≥ 50,000 to 100,000 t/year: 4 samples & tests ≥ 100,000 to 200,000 t/year: 6 samples & tests ≥ 200,000 to 300,000 t/year: 8 samples & tests For every additional 100,000t (or part thereof) /year: 2 additional samples & tests	
Bulk GMO controlled feed <u>and</u> bulk feed subject to mandatory labelling <u>and</u> if certified company does not know which products are present at the subcontracted storage location	< 2,000 t/year: 1 sample & test ≥ 2,000 to 5,000 t/year: 3 samples & tests ≥ 5,000 to 10,000 t/year: 5 samples & tests ≥ 10,000 to 50,000 t/year: 10 samples & tests ≥ 50,000 to 100,000 t/year: 15 samples & tests ≥ 100,000 to 200,000 t/year: 20 samples & tests ≥ 200,000 to 300,000 t/year: 25 samples & tests For every additional 100,000 t (or part thereof) /year: 5 additional samples & tests	No (additional) sampling and testing

## 2B. Trading companies converting into GMO controlled feed materials

The table below applies to the certified company, as meant in [paragraph 4.3.1](#) above, who buys a feed material from a non-certified supplier in which genetic modification can be technically detected through PCR tests and sells this feed material as GMO controlled.

	Incoming goods	Outgoing goods
Trading activity on location certified company	Feed materials	GMO controlled feed materials
Only bulk GMO controlled feed materials which is exempt from mandatory labelling	1 sample & test of every batch of at risk feed materials	< 10,000 t/year: 1 sample & test ≥ 10,000 to 50,000 t/year: 2 samples & tests ≥ 50,000 to 100,000 t/year: 4 samples & tests ≥ 100,000 to 200,000 t/year: 6 samples & tests ≥ 200,000 to 300,000 t/year: 8 samples & tests For every additional 100,000t (or part thereof) /year: 2 additional samples & tests.

<b>Bulk GMO controlled feed materials and bulk feed subject to mandatory labelling and, if applicable, bulk feed exempt from mandatory labeling</b>	1 sample & test of every batch of at risk feed materials	< 2,000 t/year: 1 sample/test ≥ 2,000 to 5,000 t/year: 3 samples & tests ≥ 5,000 to 10,000 t/year: 5 samples & tests ≥ 10,000 to 50,000 t/year: 10 samples & tests ≥ 50,000 to 100,000 t/year: 15 samples & tests ≥ 100,000 to 200,000 t/year: 20 samples & tests ≥ 200,000 to 300,000 t/year: 25 samples & tests For every additional 100,000 t (or part thereof) /year: 5 additional samples & tests.
<b>At risk* feed materials and delivered directly to the customer</b>	1 sample & test of every batch	
<b>Not at risk* soy, rapeseed/canola, corn/maize, sugar beets or cotton delivered directly to the customer</b>	1 sample & test every year	

\* based on the certified company's individual risk assessment

## Appendix 2 Informing supplier and customer

In case the the certified company must inform his supplier(s), customer(s) and Certification Body (see [§ 6.3](#)), at least the information as mentioned in the table below must be provided.

Feed (exact name)	Compound feed	Feed material
	Feed additive	Premixture
Delivery date		
Batch identification number		
Number of delivery slip, if applicable		
Date of delivery slip, if applicable		
Date sample taken		
Place sample taken		
Unique sample identification (e.g. SampleID)		
Date of test report		
Species with finding of GMO content (e.g. soy, maize/ corn, ...)		
Test result (PCR)	Species: GMO positive, >0.9%; exact value: % of which Event 1 _____% Event 2 _____%  Species: GMO positive, >0.9%; exact value: % of which Event 1 % Event 2 %	
In the case of compound feed: Species with finding of GMO	<input type="checkbox"/> Yes If declared: Quantity of species: _____% <input type="checkbox"/> No Quantified amount of species: %	

content declared as compound feed component?	
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## Risk Management tools

That was a lot of information to digest and one might ask, what is the next step? Luckily we can offer support for the GMP+ Community when doing this. We provide support by means of various tools and guidances but as each company has a shared responsibility to feed safety, and therefor tailor-made solutions cannot be offered. However, we do help by explaining requirements and provide background information about the requirements.

We have developed various supporting materials for the GMP+ Community. These include various tools, ranging from Frequently Asked Questions (FAQ) lists to webinars and events.

### **Supporting materials related to this document (Guidelines and FAQ's)**

We have made documents available which give guidance to the GMP+ requirements as laid down in the module GMP+ FSA and GMP+ FRA. These documents give examples, answers to frequently asked questions or background information.

#### **Where to find more about the GMP+ International Risk Management tools?**

##### **Fact sheets**

More information: [GMP+ Platform](#)

##### **Product list**

More information: [Product List](#)

##### **Risk Assessments**

More information: [GMP+ Platform](#)

##### **GMP+ Monitoring database**

More information: [GMP+ Monitoring database](#)

##### **Support documents**

More information: [Support documents](#)

# We enable every company in the feed chain to take responsibility for safe and sustainable feed.

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