



MODfinder

Genetically Modified Organisms

Real-Time PCR detection and quantification

GMO is any living being added with an “extra-piece” of DNA in a lab

Using genetic engineering or transgenic technologies we can create combinations of plant, animal, bacterial and virus genes that can not occur in nature or through traditional crossbreeding methods

Real-time PCR is the gold standard in GMO analysis according to ISO norms which are now recognized worldwide as a benchmark

European Union was the first globally to introduce a legislation on the approval, traceability and detection of GMOs, including labelling of food and feed containing GMOs.

This provided maximum protection of public health and of environment, while at the same time providing a science based regulatory structure where biotechnology can flourish.

The development and application of reliable detection and quantitative analytical methods was essential for the implementation of the labelling rules.

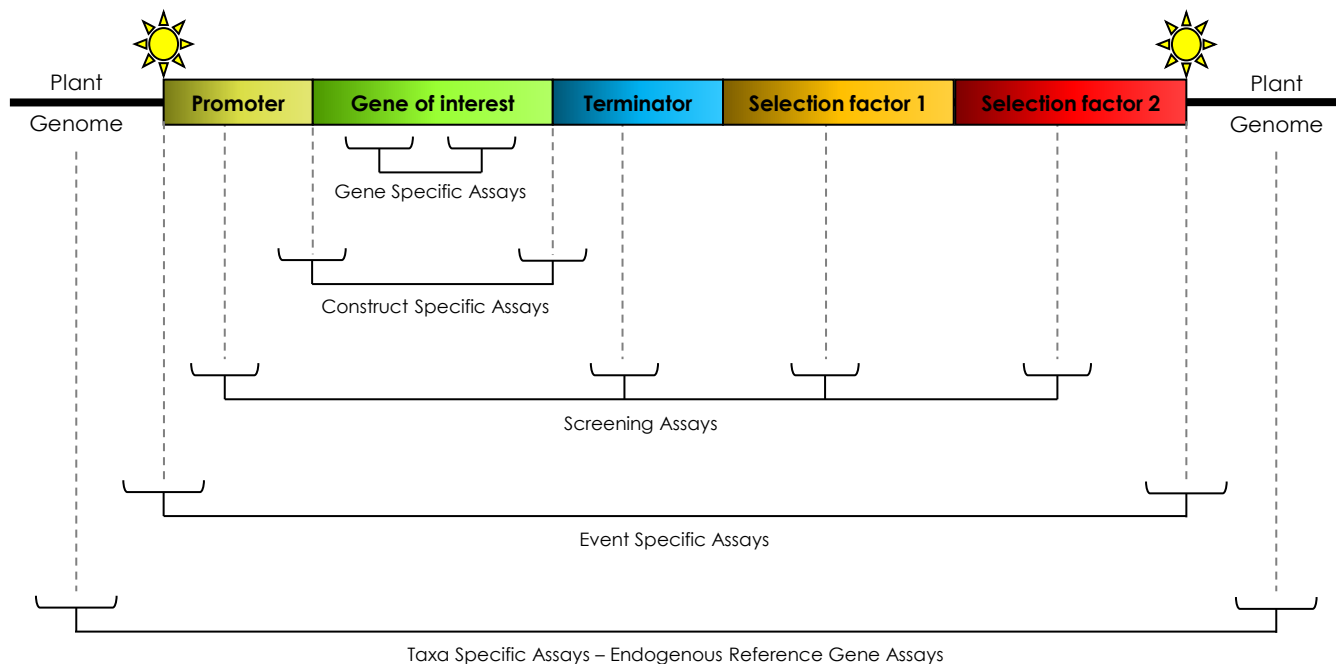
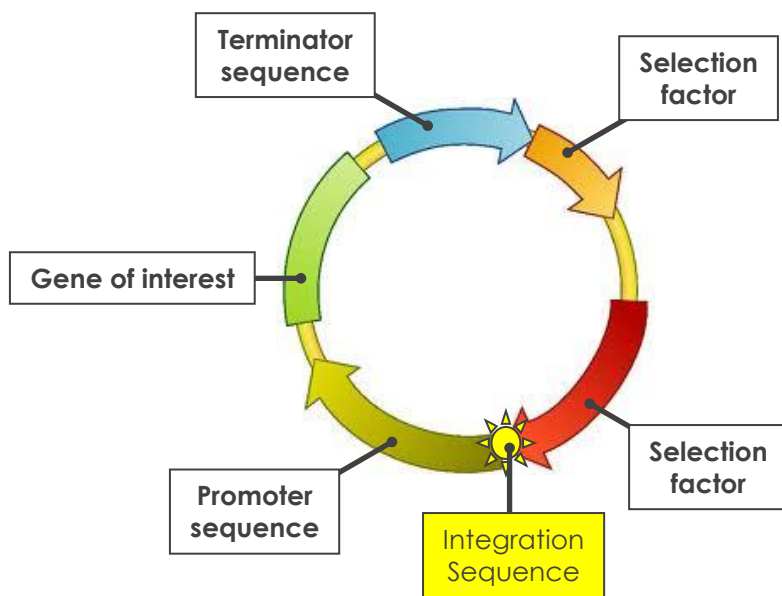
Molecular analysis required to comply with the current European Union GMO legislation consist of three distinct steps:

- Detection
- Identification
- Quantification

Using MODIfinder products, along with an appropriate DNA extraction method, enables to test the presence of GMOs in grain commodities ingredients, semifinished and finished products, according to EU norms.

Insertion is based on a circular cloning vector with several elements

When the plasmid integrates into the host genome it takes a linear structure that accounts for the different PCR-based GMO tests to detect it. These can be grouped into at least four categories corresponding to their level of specificity.



New GMO are constantly appearing and listed in databases

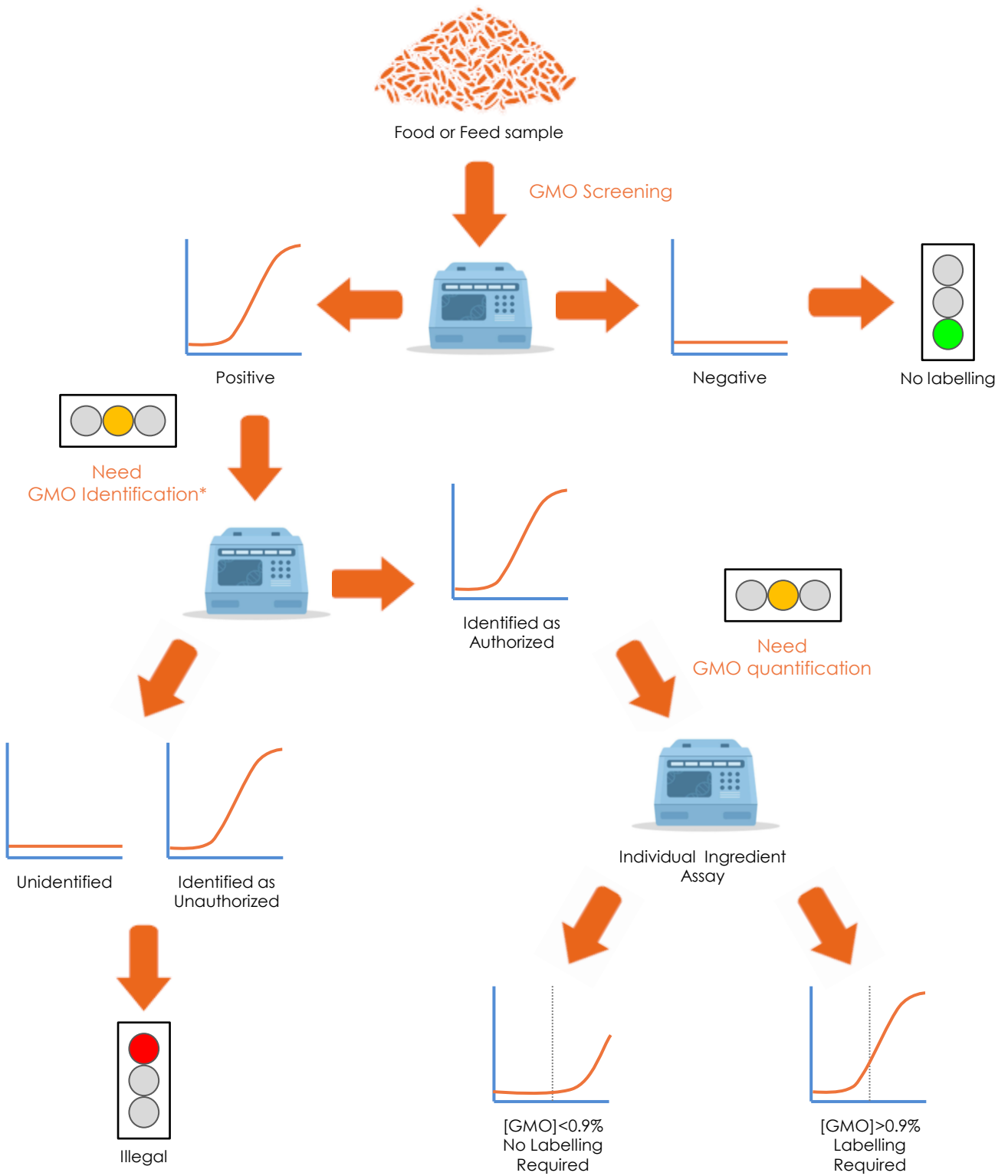
EU legislation covers all GMOs that have received Community authorization for the placing on the market; in contrast, unapproved GMOs are not permitted at any level.

As the number of genetically modified plants is increasing, it is necessary to use up-to-date methods for GMO screening and identification in food products

Regulation (EC) 1829/2003 calls for the labelling of food and feed products that intentionally contain authorized GMO or have an adventitious (accidental and technically unavoidable) presence of authorized GMOs, above a threshold of 0.9% in otherwise non-GMO food and feed. When the sample contains a mixture of GMOs, each ingredient (analytically translated as content per taxon) may not exceed 0.9%, irrespective of its proportion in the final product.

The basis for a qualitative GMO screening procedure is the use of control elements such as promoters, transcription terminators, and markers, such as resistance genes.

Negative responses from such a panel of screening methods eliminate the possibility of GMO presence in a test sample, but only if the selected screening methods cover all the GMOs to be detected.



(*) When testing complex matrices composed by more than one ingredient it is fundamental to have knowledge of the different plant varieties (taxa) present in the sample in order to restrict the number of GM specific tests to be performed.

MODfinder screening kits detect the presence of GMOs in a DNA extract

Real-Time kits for all the relevant screening target (including gene and construct specific assays) allowing their detection in single-plex or multiplex. were developed following indications published by the EURL GMFF or in other peer reviewed scientific literature. Generon collection includes also Plant/Eukaryotic generic marker to determine the overall amplifiability of the extracted DNA according to ISO 24276.

Generon developed a portfolio of kits to provide the customers with a turn-key solution to test the presence of GMO according to EURL and ISO indications. The portfolio includes all the reagents and controls to execute the detection protocols



MODfinder identification kits detect the unique signature of a transformation event that is the junction at the integration locus between the recipient genome and the inserted DNA.

The identification of the GMO contaminating the matrix under investigation is a fundamental step when considering the labelling rules enforced in Europe. Quantitation of GMO contamination must be in fact relative to something. In European legislation it refers to the presence w/w relative to the ingredient and not to the whole product. Therefore, knowing exactly which is the event to quantify is crucial. All the kits allow event detection with the sensitivity indicated by the method developers.

A. Singleplex Real-Time PCR kits for GM markers detection (50 reactions)

| | | | |
|---------------------------------|-----------|---------------------------------|----------------------------|
| MODfinder 35S Promoter (p35S) | PGE01A-50 | MODfinder 35S Terminator (t35S) | PGE03A-50 |
| MODfinder NOS Terminator (tNOS) | PGE04A-50 | MODfinder nptII | PGE07A-50 |
| MODfinder PAT | PGE14A-50 | MODfinder BAR | PGE15A-50 |
| MODfinder pan-EPSPS | PGE16A-50 | MODfinder FMV Promoter (pFMV) | PGE17A-50 |
| MODfinder Cry1Ab/Ac | PGE25A-50 | MODfinder NOS Promoter (pNOS) | PGE27A-50 |
| MODfinder tE9 marker | PGE37A-50 | MODfinder pSSuAra | PGE55A-50 (coming in 2023) |

B. Multiplex* Real-Time PCR kits for GM markers detection (50 reactions)

| | |
|---|----------------------------|
| MODfinder MultiSCREEN 2-plex p35S/tNOS | PGE05A-50 |
| MODfinder MultiSCREEN 3-plex p35S/tNOS/pFMV | PGE26A-50 |
| MODfinder MultiSCREEN 4-plex p35S/tNOS/pFMV + IAC | PGE26A-C-50 |
| MODfinder MultiSCREEN 3-plex nptII/PAT/pan-EPSPS | PGE32A-50 |
| MODfinder MultiSCREEN 4-plex p35S/tNOS/pFMV/BAR | PGE34A-50 |
| MODfinder MultiSCREEN 4-plex nptII /PAT/pan-EPSPS /pNOS | PGE35A-50 |
| MODfinder MultiSCREEN 2-plex nptII/pFMV | PGE40A-50 |
| MODfinder MultiSCREEN 4-plex pan-EPSPS/PAT/BAR/nptII | PGE42A-50 |
| MODfinder MultiSCREEN 2-plex pFMV/PAT | PGE46A-50 |
| MODfinder MultiSCREEN 4-plex p35S/tNOS/pFMV/t35S | PGE47A-50 |
| MODfinder MultiSCREEN 2-plex t35S/PAT+BAR | PGE51A-50 |
| MODfinder MultiSCREEN 2-plex t35S/pFMV | PGE52A-50 |
| MODfinder MultiSCREEN 2-plex pan-EPSPS/PAT | PGE53A-50 |
| MODfinder MultiSCREEN 2-plex nptII/BAR | PGE54A-50 |
| MODfinder MultiSCREEN 4-plex p35S/tNOS/PAT/BAR | PGE56A-50 (coming in 2023) |
| MODfinder MultiSCREEN 3-plex Cry1Ab\Ac/tE9/mEPSPS | PGE57A-50 (coming in 2023) |

C. Kits for DNA amplifiability verification (50 reactions)

| | | | |
|--------------------------------|-----------|-----------------------------|-----------|
| MODfinder 28S (eukaryotic DNA) | PGE06A-50 | MODfinder Chloroplast | PGE08A-50 |
| MODfinder Soy | PGE09A-50 | MODfinder Flax | PGE12A-50 |
| MODfinder Rice | PGE13A-50 | MODfinder Rapeseed (Canola) | PGE19A-50 |
| MODfinder Potato | PGE20A-50 | MODfinder Cotton | PGE21A-50 |
| MODfinder Sugar Beet | PGE22A-50 | MODfinder Corn | PGE24A-50 |
| MODfinder Tomato | PGE28A-50 | MODfinder Wheat | PGE29A-50 |
| MODfinder Papaya | PGE31A-50 | | |

D. Multiplex* Real-Time PCR kits for botanical impurities detection (50 reactions)

| | |
|---|-----------|
| MODfinder MultiENDO 4-plex Corn/Soy/Rapeseed/Cotton | PGE33A-50 |
| MODfinder MultiENDO 2-plex Corn/Soy | PGE43A-50 |
| MODfinder MultiENDO 3-plex Rice/Sugar Beet/Wheat | PGE48A-50 |
| MODfinder MultiENDO 4-plex Flax/Soy/Rapeseed/Cotton | PGE49A-50 |
| MODfinder MultiENDO 2-plex Rapeseed/Cotton | PGE50A-50 |

E. Multiplex* Real-Time PCR kits for viral particles detection (50 reactions)

| | |
|---------------------------------------|-----------|
| MODfinder MultiSCREEN 2-plex CaMV/FMV | PGE39A-50 |
|---------------------------------------|-----------|

* 2-plex kits (FAM/HEX); 3-plex kits (FAM/HEX/Cy5); 4-plex (FAM/HEX/Texas Red/Cy5)

Instruction for ordering - MODfinder Identification kits

A. MODfinder singleplex (FAM) Real-Time PCR kits for GM corn event ID (50 reactions)

| | | | |
|-----------|--------------------------------------|-----------|------------------------------------|
| PGC01A-50 | Corn Bt176 (UID SYN-EV176-9)* | PGC02A-50 | Corn MON810 (UID MON-00810-6) |
| PGC03A-50 | Corn T25 (UID ACS-ZM003-2) | PGC04A-50 | Corn BT11 (UID SYN-BT011-1) |
| PGC05A-50 | Corn NK603 (UID MON-00603-6) | PGC06A-50 | Corn CBH-351 (UID ACS-ZM004-3)** |
| PGC07A-50 | Corn GA21 (UID MON-00021-9) | PGC08A-50 | Corn DAS1507 (UID DAS-01507-1) |
| PGC09A-50 | Corn MON863 (UID MON-00863-5)* | PGC10A-50 | Corn MIR604 (UID SYN-IR604-5) |
| PGC11A-50 | Corn DAS59122 (UID DAS-59122-7) | PGC12A-50 | Corn DBT418 (UID DKB-89614-9)** |
| PGC13A-50 | Corn 98140 (UID DP-098140-6)** | PGC14A-50 | Corn MIR162 (UID SYN-IR162-4) |
| PGC16A-50 | Corn LY038 (UID REN-00038-3)** | PGC17A-50 | Corn Event 3272 (UID SYN-E3272-5)* |
| PGC19A-50 | Corn MON88017 (UID MON-88017-3) | PGC20A-50 | Corn MON89034 (UID MON-89034-3) |
| PGC22A-50 | Corn DAS40278 (UID DAS-40278-9) | PGC23A-50 | Corn MON87460 (UID MON-87460-4) |
| PGC24A-50 | Corn Event 5307 (UID SYN-05307-1) | PGC25A-50 | Corn MON87427 (UID MON-87427-7) |
| PGC26A-50 | Corn VCO-01981-5 (UID VCO-01981-5)** | PGC27A-50 | Corn MON87411 (UID MON-87411-9) |
| PGC29A-50 | Corn 4114 (UID DP-004114-3) | PGC30A-50 | Corn MZIR098 (UID SYN-00098-3) |
| PGC31A-50 | Corn MZHG0JG (UID SYN-000JG-2) | PGC32A-50 | Corn MON87403 (UID MON-87403-1) |
| PGC42A-50 | Corn DP202216 (DP-202216-6)** | | |

B. 2-plex# MODfinder MultiSCREEN Real-Time PCR kits for GM corn events ID (50 reactions)

| | | | |
|-----------|------------------------|-----------|------------------------|
| PGC28A-50 | Corn DAS40278/LY038 | PGC33A-50 | Corn 4114/5307 |
| PGC34A-50 | Corn Bt11/DAS1507 | PGC35A-50 | Corn GA21/DAS59122 |
| PGC36A-50 | Corn MIR162/MIR604 | PGC37A-50 | MON810/MON87403 |
| PGC38A-50 | Corn MON87411/MON87427 | PGC39A-50 | Corn MON87460/MON88017 |
| PGC40A-50 | Corn MON89034/NK603 | PGC41A-50 | Corn T25/MZHG0JG |

C. MODfinder singleplex (FAM) Real-Time PCR kits for GM corn event ID (50 reactions)

| | | | |
|-----------|---------------------------------|-----------|--|
| PGS01A-50 | Soy A2704-12 (UID ACS-GM005-3) | PGS02A-50 | Soy GTS 40-3-2 (RoundUp Ready) (UID MON-04032-6) |
| PGS03A-50 | Soy A5547-127 (UID ACS-GM006-4) | PGS04A-50 | Soy MON89788 (UID MON-89788-1) |
| PGS05A-50 | Soy DP305423 (UID DP-305423-1) | PGS06A-50 | Soy DP356043 (UID DP-356043-5)* |
| PGS07A-50 | Soy MON87701 (UID MON-87701-2) | PGS08A-50 | Soy CV127 (UID BPS-CV127-9) |
| PGS09A-50 | Soy MON87705 (UID MON-87705-6) | PGS10A-50 | Soy MON87769 (UID MON-87769-7) |
| PGS11A-50 | Soy FG72 (UID MST-FG072-2) | PGS12A-50 | Soy DAS44406 (UID DAS-44406-6) |
| PGS13A-50 | Soy DAS68416 (UID DAS-68416-4) | PGS14A-50 | Soy DAS81419 (UID DAS-81419-2) |
| PGS15A-50 | Soy MON87708 (UID MON-87708-9) | PGS19A-50 | Soy MON87751 (UID MON-87751-7) |
| PGS20A-50 | Soy SYHT0H2 (UID SYN-000H2-5) | PGS33A-50 | Soy GMB151 (UID BCS-GM151-6) |

D. Multiplex# MODfinder MultiSCREEN Real-Time PCR kits for GM soy events ID (50 reactions)

| | | | |
|-----------|---|-----------|---------------------------------|
| PGS17A-50 | 2-plex Soy CV127/DP305423 | PGS22A-50 | 2-plex Soy SYHT0H2/GMB151 |
| PGS23A-50 | 2-plex Soy MON87754/MON87751 | PGS24A-50 | 2-plex Soy A2704-12/A5547-127 |
| PGS25A-50 | 2-plex Soy CV127/MON87769 | PGS26A-50 | 2-plex Soy DAS68416/DAS44406 |
| PGS27A-50 | 2-plex Soy DP305423/DP356043 | PGS28A-50 | 2-plex Soy GTS 40-3-2/FG72 |
| PGS29A-50 | 2-plex Soy MON87705/MON89788 | PGS30A-50 | 2-plex Soy MON87708/MON87701 |
| PGS16A-50 | 3-plex Soy CV127/DP305423/MON87701 | PGS18A-50 | 3-plex Soy A2704/A5547/DP356043 |
| PGS21A-50 | 3-plex Soy CV127+MON87701/DP305423+DP356043/MON87708+MON87769 | | |
| PGS31A-50 | 4-plex Soy CV127/DP305423/MON87751/MON87708 | | |
| PGS32A-50 | 4-plex Soy MON87701/DP356043/MON87754(tE9)/MON87769 | | |

2-plex kits (FAM/HEX); 3-plex kits (FAM/HEX/Cy5); 4-plex (FAM/HEX/Texas Red/Cy5)

*Events in EU approved with restriction, phasing-out or pending approval – Inquire for availability

**Events non approved in EU – Inquire for availability

E. MODfinder singleplex (FAM) Real-Time PCR kits for GM cotton event ID (50 reactions)

| | | | |
|-----------|-------------------------------------|-----------|--------------------------------------|
| PGT01A-50 | Cotton MON531 (UID MON-00531-6) | PGT02A-50 | Cotton MON1445 (UID MON-01445-2) |
| PGT03A-50 | Cotton 281-24-236 (UID DAS-24236-5) | PGT04A-50 | Cotton 3006-210-23 (UID DAS-21023-5) |
| PGT05A-50 | Cotton LL25 (UID ACS-GH001-3) | PGT06A-50 | Cotton MON15985 (UID MON-15985-7) |
| PGT07A-50 | Cotton GHB614 (UID BCS-GH002-5) | PGT08A-50 | Cotton MON88913 (UID MON-88913-8) |
| PGT09A-50 | Cotton GHB119 (UID BCS-GH005-8) | PGT10A-50 | Cotton T304-40 (UID BCS-GH004-7) |
| PGT11A-50 | Cotton COT-102 (UID SYN-IR102-7)** | PGT12A-50 | Cotton MON88701 (UID MON-88701-3)** |
| PGT13A-50 | Cotton DAS81910 (UID DAS-81910-7)** | PGT14A-50 | Cotton GHB811 (UID BCS-GH811-4) |

F. MODfinder singleplex (FAM) Real-Time PCR kits for GM rapeseed event ID (50 reactions)

| | | | |
|-----------|---------------------------------------|-----------|--------------------------------------|
| PGZ01A-50 | Rapeseed MS8 (UID ACS-BN005-8) | PGZ02A-50 | Rapeseed RF3 (UID ACS-BN003-6) |
| PGZ03A-50 | Rapeseed RT73 (UID MON-00073-7) | PGZ04A-50 | Rapeseed T45 (UID ACS-BN008-2) |
| PGZ05A-50 | Rapeseed HCN92 (UID ACS-BN007-1)* | PGZ06A-50 | Rapeseed RF1 (UID ACS-BN001-4)* |
| PGZ07A-50 | Rapeseed RF2 (UID ACS-BN002-5)* | PGZ08A-50 | Rapeseed OXY-235 (UID ACS-BN011-5)** |
| PGZ09A-50 | Rapeseed MS1 (UID ACS-BN004-7)* | PGZ10A-50 | Rapeseed DP073496 (UID DP-073496-4)* |
| PGZ11A-50 | Rapeseed MON88302 (UID MON-88302-9)** | PGZ12A-50 | Rapeseed MS11 (UID ACS-BN012-7)** |

G. MODfinder singleplex (FAM) Real-Time PCR kits for various GM events ID (50 reactions)

| | | | |
|-----------|--------------------------------------|-----------|------------------------------|
| PGB01A-50 | Sugar beet RURH7-1 (UID KM-000H71-4) | PGF01A-50 | Flax FP967 (UID CDC-FL001-2) |
| PGP01A-50 | Potato EH92-527 (UID BPS-25271-9) | PGR01A-50 | Rice LL601 (UID BCS-OS003-7) |
| PGR02A-50 | Rice LL62 (UID ACS-OS002-5) | PGR03A-50 | Rice BT63 (UID HZU-HH001-9) |
| PGX01A-50 | Salmon AquAdvantage | PGY01A-50 | Papaya Huanhong N1 |
| PGY02A-50 | Papaya 55-1 (UID CUH-CP551-8) | | |

MODfinder quantitative kits were developed to quantify the presence of a GMO in a sample according to EU indications

MODfinder portfolio includes purified DNA extracted from traceable reference materials at a defined concentration.

Quantitation of GM content is based on the relative ratio of the copy number of the GM target (detected using the identification PCR reactions) and the copies of the corresponding species detected using the species-specific PCR reactions. Calculation requires two standard curves obtained by using DNA extracts from reference materials.

When testing matrices derived from single ingredients (soy grains, lecithin, corn, corn starch...) a convenient semi-quantitative estimation of GMO contamination can be performed through sample DNA concentration normalization.

Instruction for ordering - MODfinder reference DNA

A. Quantified Plant DNA GM-free extracts from ISO 17034 validated entities

Each vial contains 120 µL (Conc. 10 ng/ µL) of DNA; inquire for customized formats.

| | | |
|------------------------|------------------------|---------------------------|
| PGE09R-BLK10PPM Soy | PGE13R-BLK10PPM Rice | PGE19R-BLK10PPM Rapeseed |
| PGE20R-BLK10PPM Potato | PGE21R-BLK10PPM Cotton | PGE22R-BLK10PPM Sugarbeet |
| PGE24R-BLK10PPM Corn | | |

B. Quantified GM Plant DNA extracts from ISO 17034 validated entities

Each vial contains 120 µL (Conc. 10 ng/ µL) of DNA with 1% contamination; inquire for customized formats.

| | | | |
|--------|--|--------|---------------------------------------|
| PGB01R | Sugarbeet RURH7-1 (UID KM-000H71-4) | PGS07R | Soy MON87701 (UID MON-87701-2) |
| PGC01R | Corn Bt176 (UID SYN-EV176-9) | PGS08R | Soy CV127 (UID BPS-CV127-9) |
| PGC02R | Corn MON810 (UID MON-00810-6) | PGS09R | Soy MON87705 (UID MON-87705-6) |
| PGC03R | Corn T25 (UID ACS-ZM003-2) | PGS10R | Soy MON87769 (UID MON-87769-7) |
| PGC04R | Corn BT11 (UID SYN-BT011-1) | PGS11R | Soy FG72 (UID MST-FG072-2) |
| PGC05R | Corn NK603 (UID MON-00603-6) | PGS12R | Soy DAS44406 (UID DAS-44406-6) |
| PGC07R | Corn GA21 (UID MON-00021-9) | PGS13R | Soy DAS68416 (UID DAS-68416-4) |
| PGC08R | Corn DAS1507 (UID DAS-01507-1) | PGS14R | Soy DAS81419 (UID DAS-81419-2) |
| PGC09R | Corn MON863 (UID MON-00863-5) | PGS15R | Soy MON87708 (UID MON-87708-9) |
| PGC10R | Corn MIR604 (UID SYN-IR604-5) | PGS19R | Soy MON87751 (UID MON-87751-7) |
| PGC11R | Corn DAS59122 (UID DAS-59122-7) | PGS20R | Soy SYHT0H2 (UID SYN-000H2-5) |
| PGC13R | Corn 98140 (UID DP-098140-6) | PGS33R | Soy GMB151 (UID BCS-GM151-6) |
| PGC14R | Corn MIR162 (UID SYN-IR162-4) | PGT01R | Cotton MON531 (UID MON-00531-6) |
| PGC17R | Corn Event 3272 (UID SYN-E3272-5) | PGT02R | Cotton MON1445 (UID MON-01445-2) |
| PGC19R | Corn MON88017 (UID MON-88017-3) | PGT03R | Cotton 281-24-236 (UID DAS-24236-5) |
| PGC20R | Corn MON89034 (UID MON-89034-3) | PGT04R | Cotton 3006-210-23 (UID DAS-21023-5) |
| PGC22R | Corn DAS40278 (UID DAS-40278-9) | PGT05R | Cotton LL25 (UID ACS-GH001-3) |
| PGC23R | Corn MON87460 (UID MON-87460-4) | PGT06R | Cotton MON15985 (UID MON-15985-7) |
| PGC24R | Corn Event 5307 (UID SYN-05307-1) | PGT07R | Cotton GHB614 (UID BCS-GH002-5) |
| PGC25R | Corn MON87427 (UID MON-87427-7) | PGT08R | Cotton MON88913 (UID MON-88913-8) |
| PGC26R | Corn VCO-01981-5 (UID VCO-01981-5) | PGT09R | Cotton GHB119 (UID BCS-GH005-8) |
| PGC27R | Corn MON87411 (UID MON-87411-9) | PGT10R | Cotton T304-40 (UID BCS-GH004-7) |
| PGC29R | Corn 4114 (UID DP-004114-3) | PGT11R | Cotton COT-102 (UID SYN-IR102-7) |
| PGC30R | Corn MZIR098 (UID SYN-00098-3) | PGT12R | Cotton MON88701 (UID MON-88701-3) |
| PGC31R | Corn MZHGOJG (UID SYN-000JG-2) | PGT13R | Cotton DAS81910 (UID DAS-81910-7) |
| PGC32R | Corn MON87403 (UID MON-87403-1) | PGT14R | Cotton GHB811 (UID BCS-GH811-4) |
| PGC42R | Corn DP202216 (UID DP-202216-6) | PGZ01R | Rapeseed MS8 (UID ACS-BN005-8) |
| PGP01R | Potato EH92-527 (UID BPS-25271-9) | PGZ02R | Rapeseed RF3 (UID ACS-BN003-6) |
| PGP02R | Potato AM04-1020 (UID BPS-A1020-5) | PGZ03R | Rapeseed GT73 (UID MON-00073-7) |
| PGP03R | Potato AV43-6-G7 (UID AVE-436G7-1) | PGZ04R | Rapeseed T45 (UID ACS-BN008-2) |
| PGP04R | Potato PH05-026-0048 (UID BPS-PH048-1) | PGZ05R | Rapeseed TOPAS 19 2 (UID ACS-BN007-1) |
| PGR02R | Rice LL62 (UID ACS-OS002-5) | PGZ06R | Rapeseed RF1 (UID ACS-BN001-4) |
| PGS01R | Soy A2704-12 (UID ACS-GM005-3) | PGZ07R | Rapeseed RF2 (UID ACS-BN002-5) |
| PGS02R | Soy GTS 40-3-2 (UID MON-04032-6) | PGZ09R | Rapeseed MS1 (UID ACS-BN004-7) |
| PGS03R | Soy A5547-127 (UID ACS-GM006-4) | PGZ10R | Rapeseed DP073496 (UID DP-073496-4) |
| PGS04R | Soy MON89788 (UID MON-89788-1) | PGZ11R | Rapeseed MON88302 (UID MON-88302-9) |
| PGS05R | Soy DP305423 (UID DP-305423-1) | PGZ12R | Rapeseed MS11 (UID ACS-BN012-7) |
| PGS06R | Soy DP356043 (UID DP-356043-5) | PGZ13R | Rapeseed LBFLFK (UID BPS-BFLFK-2) |

Instruction for ordering - MODfinder quantification kits

Each kit contains: event specific primers and probe mix (50 tests, 30 µl reaction end volume); taxon specific primers and probe mix (50 tests, 30 µl reactions end volume); standard solutions at scalar target GM concentration; taxon DNA standard solutions at scalar concentration; negative control. Standard solutions are obtained extracting lot traceable reference materials using Ion-Force DNA Extraction kit.

A. MODfinder Real-Time PCR kits for GM corn quantification (50 reactions)

| | | | |
|-----------|---------------------------------|-----------|-----------------------------------|
| PGC01Q-50 | Corn Bt176 (UID SYN-EV176-9)* | PGC02Q-50 | Corn MON810 (UID MON-00810-6) |
| PGC03Q-50 | Corn T25 (UID ACS-ZM003-2) | PGC04Q-50 | Corn BT11 (UID SYN-BT011-1) |
| PGC05Q-50 | Corn NK603 (UID MON-00603-6) | PGC07Q-50 | Corn GA21 (UID MON-00021-9) |
| PGC08Q-50 | Corn DAS1507 (UID DAS-01507-1) | PGC09Q-50 | Corn MON863 (UID MON-00863-5)* |
| PGC10Q-50 | Corn MIR604 (UID SYN-IR604-5) | PGC11Q-50 | Corn DAS59122 (UID DAS-59122-7) |
| PGC13Q-50 | Corn 98140 (UID DP-098140-6)** | PGC14Q-50 | Corn MIR162 (UID SYN-IR162-4) |
| PGC17Q-50 | Corn Event 3272 (SYN-E3272-5)* | PGC19Q-50 | Corn MON88017 (UID MON-88017-3) |
| PGC20Q-50 | Corn MON89034 (UID MON-89034-3) | PGC22Q-50 | Corn DAS40278 (UID DAS-40278-9) |
| PGC23Q-50 | Corn MON87460 (UID MON-87460-4) | PGC24Q-50 | Corn Event 5307 (UID SYN-05307-1) |
| PGC25Q-50 | Corn MON87427 (UID MON-87427-7) | PGC26Q-50 | Corn VCO-01981 (VCO-01981-5)** |
| PGC27Q-50 | Corn MON87411 (UID MON-87411-9) | PGC29Q-50 | Corn 4114 (UID DP-004114-3) |
| PGC30Q-50 | Corn MZIR098 (UID SYN-00098-3) | PGC31Q-50 | Corn MZHGOJG (UID SYN-000JG-2) |
| PGC32Q-50 | Corn MON87403 (UID MON-87403-1) | PGC42Q-50 | Corn DP202216 (DP-202216-6)** |

B. MODfinder Real-Time PCR kits for GM soy quantification (50 reactions)

| | | | |
|-----------|---------------------------------|-----------|----------------------------------|
| PGS01Q-50 | Soy A2704-12 (UID ACS-GM005-3) | PGS02Q-50 | Soy GTS 40-3-2 (UID MON-04032-6) |
| PGS03Q-50 | Soy A5547-127 (UID ACS-GM006-4) | PGS04Q-50 | Soy MON89788 (UID MON-89788-1) |
| PGS05Q-50 | Soy DP305423 (UID DP-305423-1) | PGS06Q-50 | Soy DP356043 (UID DP-356043-5)* |
| PGS07Q-50 | Soy MON87701 (UID MON-87701-2) | PGS08Q-50 | Soy CV127 (UID BPS-CV127-9) |
| PGS09Q-50 | Soy MON87705 (UID MON-87705-6) | PGS10Q-50 | Soy MON87769 (UID MON-87769-7) |
| PGS11Q-50 | Soy FG72 (UID MST-FG072-2) | PGS12Q-50 | Soy DAS44406 (UID DAS-44406-6) |
| PGS13Q-50 | Soy DAS68416 (UID DAS-68416-4) | PGS14Q-50 | Soy DAS81419 (UID DAS-81419-2) |
| PGS15Q-50 | Soy MON87708 (UID MON-87708-9) | PGS19Q-50 | Soy MON87751 (UID MON-87751-7) |
| PGS20Q-50 | Soy SYHT0H2 (UID SYN-000H2-5) | PGS33Q-50 | Soy GMB151 (UID BCS-GM151-6) |

C. MODfinder Real-Time PCR kits for GM cotton quantification (50 reactions)

| | | | |
|-----------|-------------------------------------|-----------|--------------------------------------|
| PGT01Q-50 | Cotton MON531 (UID MON-00531-6) | PGT02Q-50 | Cotton MON1445 (UID MON-01445-2) |
| PGT03Q-50 | Cotton 281-24-236 (UID DAS-24236-5) | PGT04Q-50 | Cotton 3006-210-23 (UID DAS-21023-5) |
| PGT05Q-50 | Cotton LL25 (UID ACS-GH001-3) | PGT06Q-50 | Cotton MON15985 (UID MON-15985-7) |
| PGT07Q-50 | Cotton GHB614 (UID BCS-GH002-5) | PGT08Q-50 | Cotton MON88913 (UID MON-88913-8) |
| PGT09Q-50 | Cotton GHB119 (UID BCS-GH005-8) | PGT10Q-50 | Cotton T304-40 (UID BCS-GH004-7) |
| PGT11Q-50 | Cotton COT-102 (UID SYN-IR102-7)** | PGT12Q-50 | Cotton MON88701 (UID MON-88701-3)** |
| PGT13Q-50 | Cotton DAS81910 (UID DAS-81910-7)** | PGT14Q-50 | Cotton GHB811 (UID BCS-GH811-4) |

D. MODfinder Real-Time PCR kits for GM rapeseed quantification (50 reactions)

| | | | |
|-----------|---------------------------------------|-----------|-------------------------------------|
| PGZ01Q-50 | Rapeseed MS8 (UID ACS-BN005-8) | PGZ02Q-50 | Rapeseed RF3 (UID ACS-BN003-6) |
| PGZ03Q-50 | Rapeseed GT73 (UID MON-00073-7) | PGZ04Q-50 | Rapeseed T45 (UID ACS-BN008-2) |
| PGZ05Q-50 | Rapeseed Topas19/2 (UID ACS-BN007-1)* | PGZ06Q-50 | Rapeseed RF1 (UID ACS-BN001-4)* |
| PGZ07Q-50 | Rapeseed RF2 (UID ACS-BN002-5)* | PGZ09Q-50 | Rapeseed MS1 (UID ACS-BN004-7)* |
| PGZ10Q-50 | Rapeseed DP073496 (UID DP-073496-4)* | PGZ11Q-50 | Rapeseed MON88302 (UID MON-88302-9) |
| PGZ12Q-50 | Rapeseed MS11 (UID ACS-BN012-7)** | | |

E. MODfinder Real-Time PCR kits for various GM events GM quantification (50 reactions)

| | |
|-----------|------------------------------|
| PGB01Q-50 | Sugarbeet H7-1 (KM-000H71-4) |
|-----------|------------------------------|

*Events in EU approved with restriction, phasing-out or pending approval – Inquire for availability

**Events non approved in EU – Inquire for availability





INGREDIENTS AUTHENTICITY | CHEMICAL RESIDUES
MICROBIOLOGY | MYCOTOXINS
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