

# Suitability of Testing for GMOs in Raw Materials, Feed- and Food Ingredients

## Plant-based feed, raw materials and food

Species with potential genetic modification	Products/feed that can be tested	Products/feed that cannot be tested <sup>1</sup>
Soy	(extruded) soy beans, soy flour, soy (extraction) meal, soybean cakes, soybean casings, soy pulp/paste, soy protein (concentrate), fermented soy protein concentrate*, tofu and food made from it (preferably > 5%), Soybean oil* (cold pressed & unfiltered), soy lecithin*	soy bean oil, soy sauce
Maize/corn	Corn kernels (popcorn corn, sweet corn), corn flakes*, corn flour, corn meal, polenta, corn bran, corn germs, corn germ cake, corn germ extraction meal, corn silage*, corn chips, native and, if applicable, modified corn starch*, corn gluten*, Corn oil* (cold pressed & unfiltered)	Corn fiber, corn mash (corn distiller grain and distiller dried grains soluble), glucose syrup from corn, corn oil, dextrose, maltodextrin, glucose
Rapeseed/canola	(extruded) rapeseed, rapeseed/canola cake, post-extraction rapeseed/canola meal, rapeseed/canola protein concentrate, rapeseed/canola and blossom honey, rapeseed/canola lecithin*, mustard (botanical contamination), Rapeseed oil* (cold pressed & unfiltered)	rapeseed/canola oil, margarine/vegetable fat from rapeseed/canola, glycerine
Rice	Rice noodles, long-grain rice including basmati, rice flour, rice starch	
Papaya	Papaya fruit, dried and frozen papaya, papaya mousse	Alcohol papaya extracts (e. g. in food supplements), papaya juice

<sup>1</sup> Due to a lack of sufficient DNA (genetic material) PCR testing in strongly processed products/feedstuffs is not possible.

Species with potential genetic modification	Products/feed that can be tested	Products/feed that cannot be tested <sup>1</sup>
Flaxseed	Whole flax seeds, bread with flax seeds, flax meal, Linseed oil* (cold pressed & unfiltered)	flaxseed oil
Potatoes	Potato flour/starch*, chips*, etc.	Potato brandy
Tomatoes	Tomato paste*, tomato ketchup*	
Sugar beet	Sugar beet seeds, sugar beet (pressed) pulp*, molasses pulp*, dried sugar beet pulp*, cooked sugar beet pulp*, wet sugar beet pulp,	sugar beet molasses, refined sugar, sugar syrup
Cotton	Cotton seed, cotton seed meal, cotton seed cake, cotton extraction meal, Cottonseed oil* (cold pressed & unfiltered)	cotton seed oil
Peppers, chili	Bell peppers, chili peppers, spices	

\* DNA amount fluctuates, to be tested as pure products, pLOD<sup>2</sup> recommended

### **Testing for contamination**

The raw materials in the table are potentially genetically modified organisms (GMOs).

Besides testing these products, we suggest testing for contamination in raw materials/feed during the transport/storage and/or processing of which the risk of contamination with potential GMOs is high, even though the raw materials/feed themselves are not GMOs.

**Example:** Wheat, sunflower, mustard, mixed spices, pepper, sesame paste, etc.

<sup>2</sup> Practical Limit of detection (pLOD): smallest amount of target DNA that can still be identified with a certainty of 95 % can be identified.

**Raw materials of animal origin/food**

Prepared, processed food	Products that can be tested	Products that cannot be tested <sup>1</sup>
Meat, meat products, fish, fish products, Egg, Egg products	Plant-based products (e. g. spices/herbs) see table above, salmon, salmon products	Meat, Egg, ascorbic acid (E300), citric acid (E330), salt, aromas, vegetable oil
Milk, dairy products	If applicable, fruit preparations (e. g. fruit, starch), spices see table above	Milk, natural yoghurt, cream, sour cream, crème fraîche, (pure) cheese, quark cheese etc., ascorbic acid (E300), citric acid (E330), microbial rennet, aromas, beta carotene (microbial), xanthan, sorbitol, if applicable

These tables are not intended to be exhaustive (we assume no guarantee). They will be updated as necessary.