FOOD SAFETY AND FOOD SECURITY

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EU Food Safety overview

https://ec.europa.eu/food/overview_en

FOOD SAFETY: OVERVIEW

- RASFF - FOOD & FEED SAFETY ALERTS
- AGRI-FOOD FRAUD
- LABELLING AND NUTRITION
- FOOD IMPROVEMENT AGENTS
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- NOVEL FOOD
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- ANIMAL FEED
- ANIMAL BY-PRODUCTS
- FOOD WASTE

HORIZONTAL TOPICS RELATED TO FOOD SAFETY

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- FUNDING, PROCUREMENT & GRANTS
- FITNESS CHECK OF THE FOOD CHAIN
- EXPERT GROUPS
- FUTURE FOOD SAFETY BUDGET AND POLICY
- COMMITTEES
- OFFICIAL CONTROLS AND ENFORCEMENT
- EU REFERENCE LABORATORIES AND CENTRES
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- CONSULTATIONS AND FEEDBACK
- HEALTH AND FOOD AUDITS AND ANALYSIS
- FARM TO FORK STRATEGY
- BETTER TRAINING FOR SAFER FOOD
- MEDIA

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For chemical substances in food, legislation is divided into the following areas:

- **Food additives:** based on the principle that only additives that are explicitly authorised may be used, often in limited quantities in specific foodstuffs. Prior to their authorisation by the Commission, food additives are evaluated for their safety
- F**lavourings:** sets limits on the presence of undesirable compounds, while for the chemically defined flavouring substances a vast safety evaluation programme is ongoing. Only substances for which the outcome of the evaluation is favourable will be authorised for use in foodstuffs by means of a future positive list
- C**ontaminants:** based on scientific advice and the principle that contaminant levels shall be kept as low as can be reasonably achieved following good working practices. Maximum levels have been set for certain contaminants (e.g. mycotoxins, dioxins, heavy metals, nitrates, chloropropanols)
- **Residues of veterinary medicinal products & Pesticides:** used in food producing animals and on residues of plant protection products (pesticides). If necessary, maximum residue limits (MRLs) are established and in some cases the use of substances is prohibited
- **Food contact materials:** no migration of components into food in quantities that could endanger human health or change the composition, the taste or the texture of food

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CHEMICAL SAFETY

CHEMICAL SAFETY

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- Hormones in Meat
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EU Food Safety
Contaminants

Contaminants: substances **not intentionally added to food**.

These substances may be present in food as a result of the various stages of its **production, packaging, transport or holding**. They also might result from **environmental contamination**.
Contamination generally has a negative impact on the quality of food and may imply a risk to human health.

European Union measures (establishment of maximum levels) have been taken for the following contaminants:

- **mycotoxins** (aflatoxins, ochratoxin A, fusarium-toxins, patulin, citrinin)
- **metals** (cadmium, lead, mercury, inorganic tin, arsenic)
- **dioxins** and **Polychlorinated Biphenyls** (PCBs)
- **Polycyclic Aromatic Hydrocarbons (PAH)**
- **3-MCPD**
- **melamine**
- **erucic acid**
- **nitrates**

https://ec.europa.eu/food/safety/chemical_safety/contaminants_en

EU Food Safety
Residue of Veterinary Medicine Product

Food-producing animals may be treated with veterinary medicines to prevent or cure disease. These substances **may leave residues in the food from treated animals**. Food may also contain residues of pesticides and contaminants to which animals have been exposed to. In all cases, the levels of residues in food should not harm the consumer.

Obligations

- EU countries must implement **residue monitoring plans** to detect the illegal use or misuse of authorised veterinary medicines in food producing animals and investigate the reasons for residue violations
- Non-EU countries exporting to the EU must implement a residue monitoring plan which guarantees an equivalent level of food safety

The **European Medicines Agency (EMA)** is responsible for assessing Maximum Residue Limits for veterinary medicinal products marketed in the EU.

https://ec.europa.eu/food/safety/chemical_safety/vet_med_residues_en

EU Food Safety
Hormones in Meat

Hormones: substances having a hormonal action for growth promotion in farm animals.
E.g. oestradiol 17ß, testosterone, progesterone, zeranol, trenbolone acetate and melengestrol acetate (MGA).

1981 the EU prohibited the use of hormones and the imports from third countries

1991 The **Scientific Committee on Veterinary Measures relating to Public Health** (SCVPH) concluded that no acceptable daily intake (ADI) could be established for any of these hormones. For oestradiol 17ß it concluded that has to be considered as a complete carcinogen.

1996 **Directive 96/22** confirms the prohibition of substances having a hormonal action.

1997 a panel of the WTO ruled that the EU measure was not in line with the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS).

1998 the WTO Appellate Body reversed most of the findings of the panel claiming that the risk assessment was not performed properly.

2000 The SCVPH performed a new risk assessment complying with WTO requirements. It confirmed its opinion.

2003 **Directive 2003/74** confirms the prohibition of substances having a hormonal action, but implemented its international obligations in the context of the WTO.

EU Food Safety
Pesticide Residue

A '**pesticide**' is something that:

- prevents, destroys, or controls a harmful organism ('pest') or disease, or
- protects plants or plant products during production, storage and transport.

The term includes, amongst others: herbicides, fungicides, insecticides, acaricides, nematicides, molluscicides, rodenticides, growth regulators, repellents, rodenticides and biocides.

The term *'pesticide'* is often used interchangeably with *'plant protection product'*, however, pesticide is a broader term that also covers non plant/crop uses, for example biocides.

https://ec.europa.eu/food/plant/pesticides_en

EU Food Safety
Pesticide Residue

They contain at least one **active substance** and have one of the following functions:

- protect plants or plant products against pests/diseases, before or after harvest
- influence the life processes of plants
- preserve plant products
- destroy or prevent growth of undesired plants or parts of plants

They may also contain other components including safeners and synergists.

The traces pesticides leave in treated products are called "residues".

A maximum residue level (MRL) is the highest level of a pesticide residue that is legally tolerated in or on food or feed when pesticides are applied correctly GAP.

Key points

- The amounts of residues in food must be safe for consumers and must be as low as possible.
- The European Commission fixes MRLs for all food and animal feed
- The MRLs for all crops and all pesticides can be found in the MRL database on the Commission website.

https://ec.europa.eu/food/plant/pesticides_en

EU Food Safety
EU Pesticide Database

https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN

EU Food Safety
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EU Food Safety
EU Pesticide Database

Search active substances

Pesticides home | Advanced Search | Export to Excel

Search:

Showing 1 to 50 of 1,427 entries 50 records per page

‹ 1 2 3 4 5 ... 29 ›

Name	Status under Reg. (EC) No 1107/2009	Date of approval	Expiration of approval	Legislation
(4Z-9Z)-7,9-Dodecadien-1-ol	Not Approved			2004/129/EC
(E)-10-Dodecen-1-yl acetate	Not Approved			2004/129/EC
(E)-11-Tetradecen-1-yl acetate	Approved	01/09/2009	31/08/2021	Reg. (EU) No 540/2011Reg. (EU) No 918/2014Reg. (EU)2020/1160 (2008/127,Reg. (EU) 2017/195)
(E)-2-Methyl-6-methylene-2,7-octadien-1-ol (myrcenol)	Not Approved			2007/442
(E)-2-Methyl-6-methylene-3,7-octadien-2-ol (isomyrcenol)	Not Approved			Reg 647/2007
(E)-5-Decen-1-ol	Approved	01/09/2009	31/08/2021	Reg. (EU) No 540/2011Reg. (EU) No 918/2014Reg. (EU)2020/1160 (2008/127,Reg. (EU) 2017/195)
(E)-5-Decen-1-yl acetate	Approved	01/09/2009	31/08/2021	Reg. (EU) No 540/2011Reg. (EU) No 918/2014Reg. (EU)2020/1160 (2008/127,Reg. (EU) 2017/195)
(E)-8-Dodecen-1-yl acetate	Approved	01/09/2009	31/08/2021	Reg. (EU) No 540/2011Reg. (EU) No 918/2014Reg. (EU)2020/1160 (2008/127,Reg. (EU)

https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN

EU Food Safety
EU Pesticide Database

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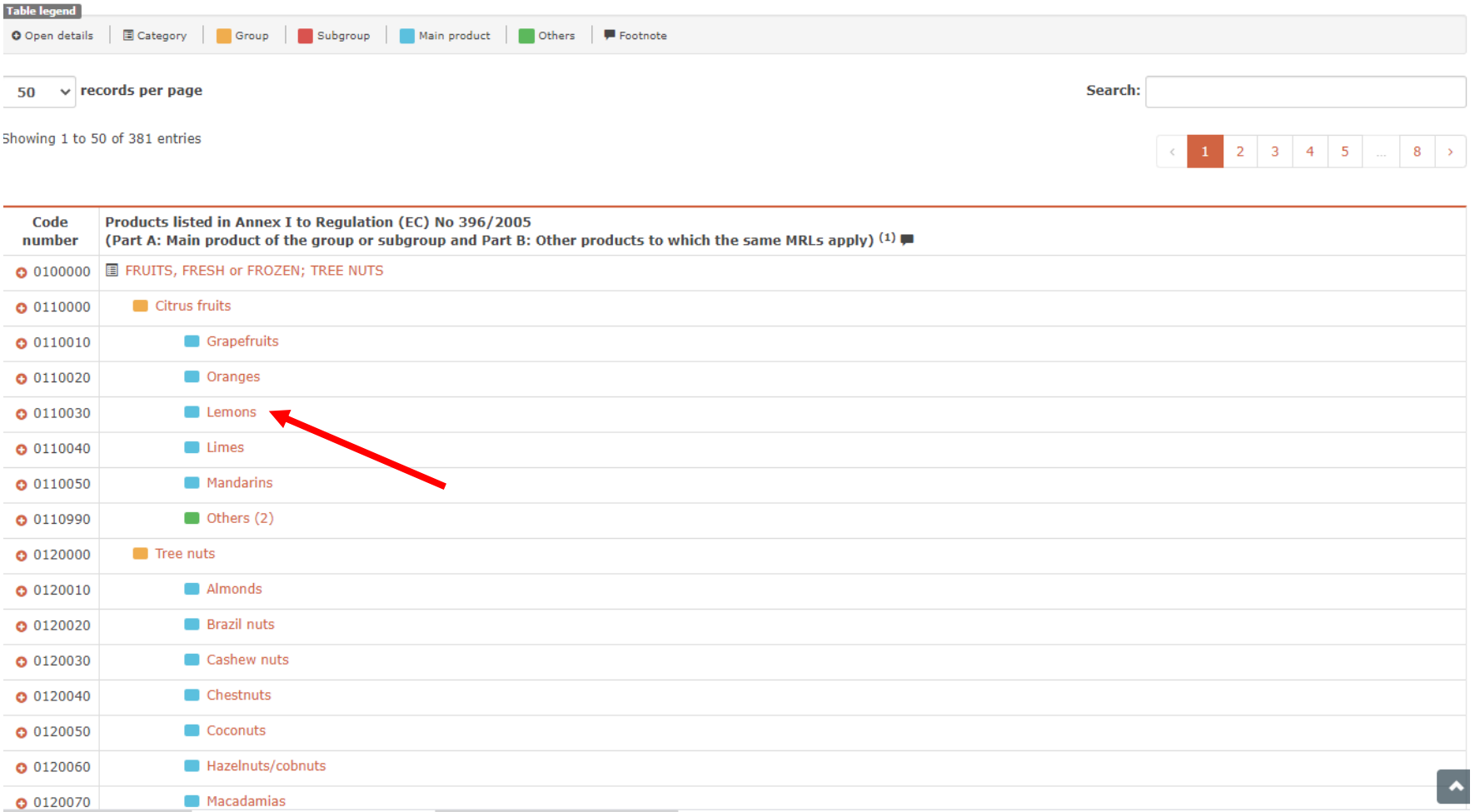
EU Food Safety
EU Pesticide Database

Search products



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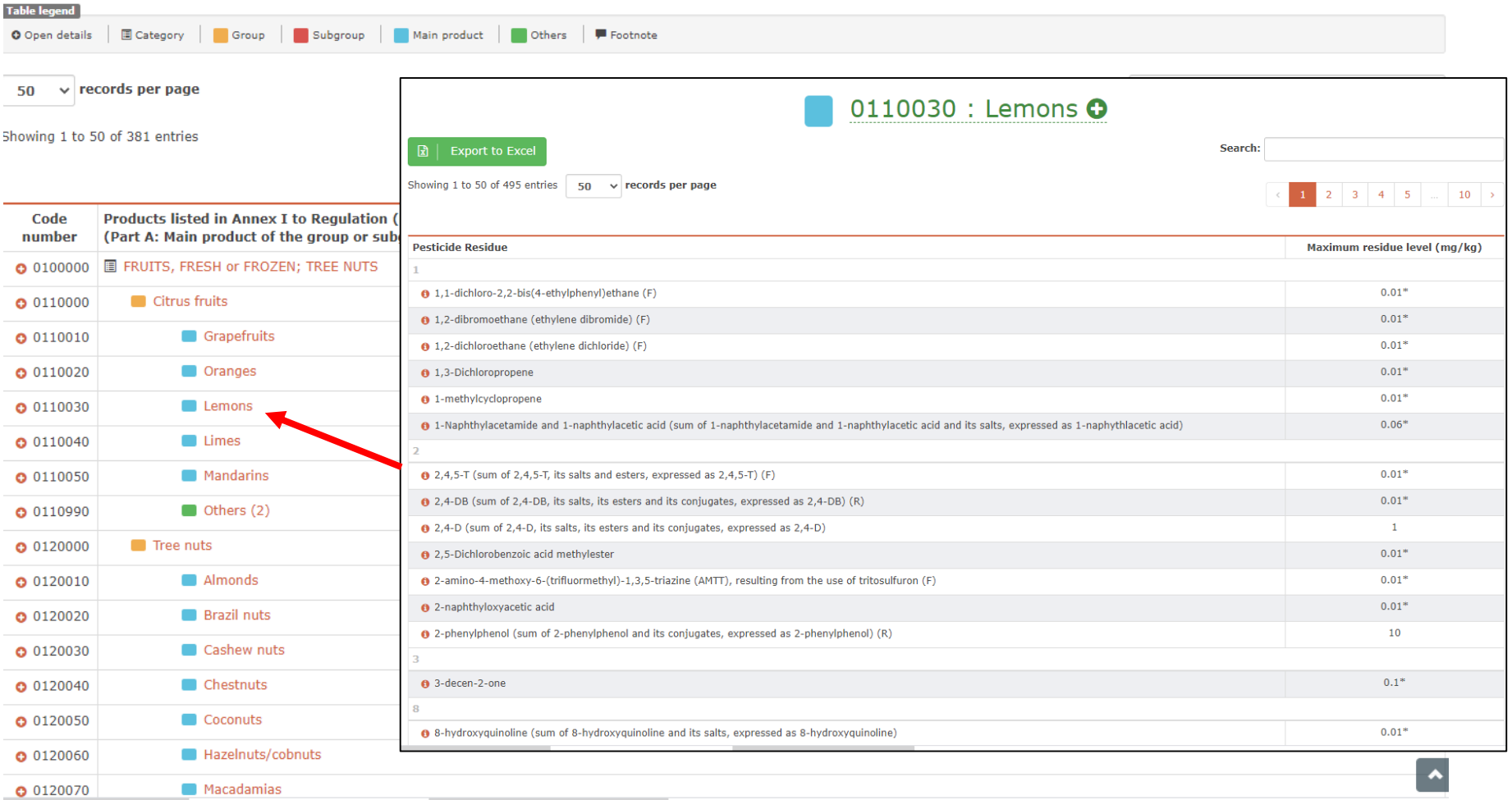
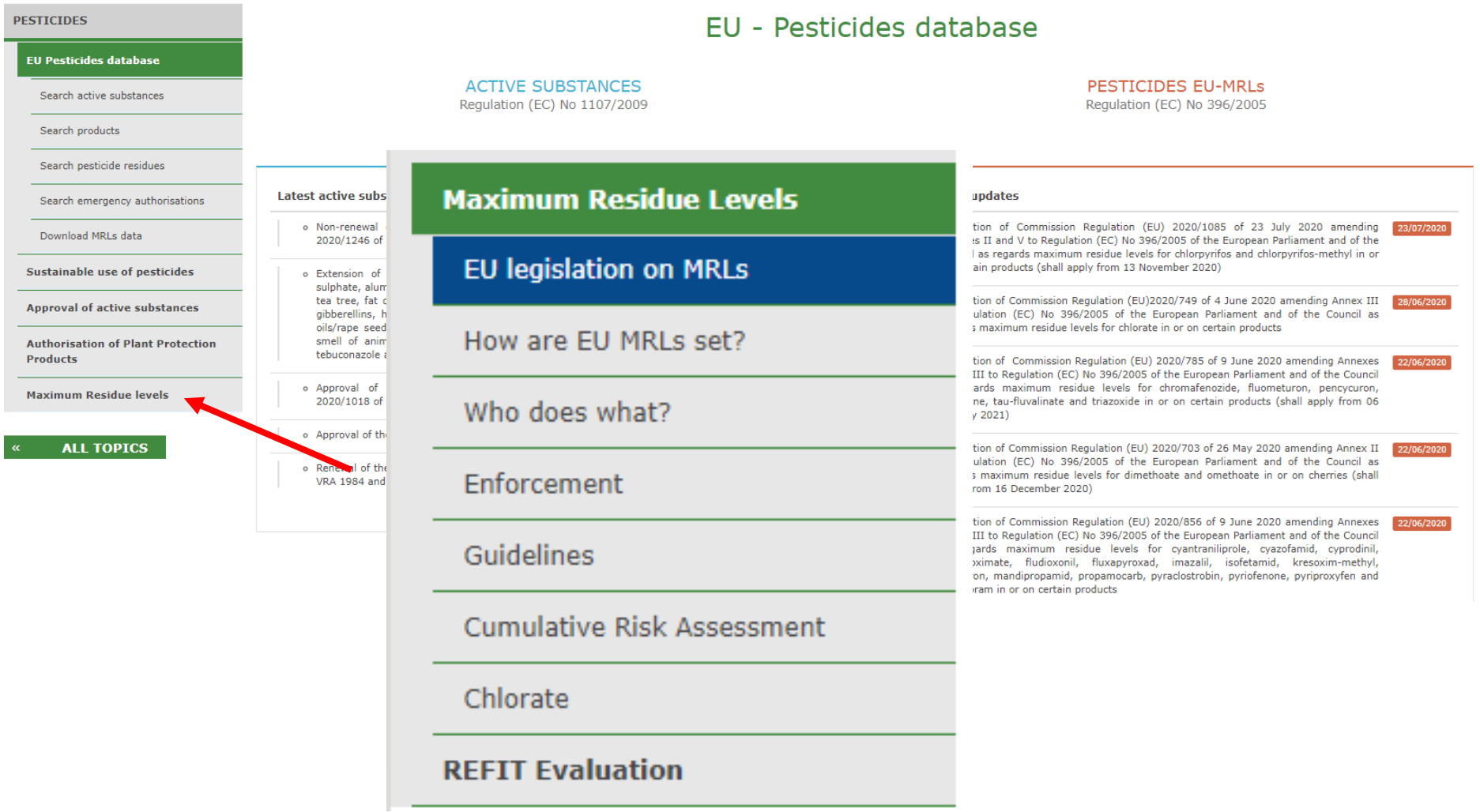
EU Food Safety
EU Pesticide Database

Search products



https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN

EU Food Safety
EU Pesticide Database



https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN

EU Food Safety
Maximum Residue Level: How are they set?

Applicants must submit the following for the setting of MRLs for pesticides:

- The use of a pesticide on the crop e.g. quantity, frequency, growth stage of the plant, etc;
- Experimental data on the expected residues when the pesticide is applied according to GAP;
- Toxicological reference values for the pesticide.

Based on the available information, the intake of residues through all food that may be treated with that pesticide is compared with the:

- Acceptable Daily Intake (ADI)
- Acute Reference Dose (ARfD) for long and short-term intake

https://ec.europa.eu/food/plant/pesticides/max_residue_levels/application_en

EU Food Safety
Maximum Residue Level: How are they set?

Risk assessment: The European Food Safety Authority (EFSA) verifies that this residue is safe for all European consumer groups, including vulnerable groups such as babies, children and vegetarians.

When a risk is established for any consumer group, the MRL application is rejected and the pesticide may not be used on that crop.

Setting MRLs: The Commission sets a new MRL and amends or removes an existing one after EFSA's opinion. The Commission adopts Regulations for the purpose.

Enforcement & control: The national authorities define how and when the pesticide may be used. That information is on the label of the pesticide.

Authorisations are granted on a national basis because local and environmental conditions and the occurrence of pests (therefore, use of pesticides) may differ.

Non-EU imported crops
For crops grown outside the EU, MRLs are set on the request of the exporting country.

https://ec.europa.eu/food/plant/pesticides/max_residue_levels/application_en

EU Food Safety
Maximum Residue Level: How are they set?

What if the requested MRL is not safe?

It is set at the **lowest limit of analytical determination** (LOD). That is the MRL also for crops on which the pesticide has not been used or when its use has not left detectable residues.

The default lowest limit (LOD) in EU law is **0,01 mg/kg**.

https://ec.europa.eu/food/plant/pesticides/max_residue_levels/application_en

EU Food Safety
Food Contact Materials

Food comes into contact with many materials and articles during its production, processing, storage, preparation and serving, before its eventual consumption. Such materials and articles are called **Food Contact Materials (FCMs)**.

This includes direct or indirect contact. Examples include:

- containers for transporting food
- machinery to process food
- packaging materials
- kitchenware and tableware

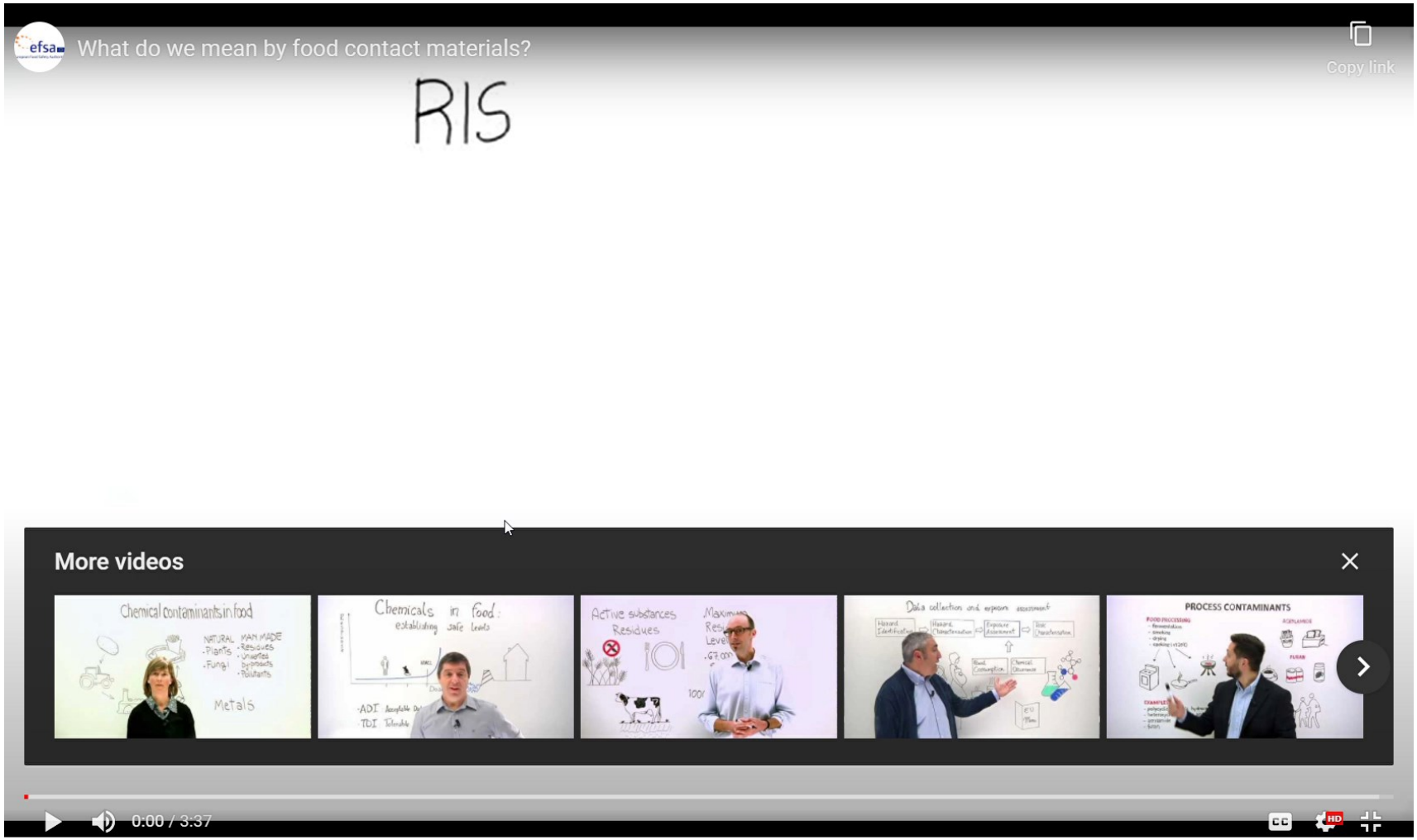
The term **does not cover fixed public or private water supply equipment**.

FCMs should be **sufficiently inert** so that their constituents neither adversely affect consumer health nor influence the quality of the food.
To ensure the safety of FCMs, and to facilitate the free movement of goods, EU law provides for binding rules that business operators must comply with.

https://ec.europa.eu/food/safety/chemical_safety/food_contact_materials_en

EU Food Safety
Food Contact Materials

The safety of FCM is evaluated by the **European Food Safety Authority** (EFSA). At EFSA's website you can search for opinions on substances to be used in food contact materials.



https://youtu.be/7LMnc4czpuY

EU Food Safety
Food Contact Materials

The safety of FCMs is tested by the business operators placing them on the market, and by the competent authorities of the Member States during official controls.

Scientific knowledge and technical competence on testing methods is being maintained by the **European Reference Laboratory for Food Contact Materials (EURL-FCM)**. Its website provides guidelines and other resources concerning the testing of food contact materials.

https://ec.europa.eu/food/safety/chemical_safety/food_contact_materials_en

EU Food Safety
Food Contact Materials
Legislation

The framework Regulation

Commission Regulation (EC) No 1935/2004 provides a harmonised legal EU framework. It sets out the general principles of safety and inertness for all Food Contact Materials (FCMs).

The principles set out in Reg. No 1935/2004 require that materials do not:

- Release their constituents into food at levels harmful to human health
- Change food composition, taste and odour in an unacceptable way

Moreover, the framework provides:

- for special rules on active and intelligent materials (they are by their design not inert)
- powers to enact additional EU measures for specific materials (e.g. for plastics)
- the procedure to perform safety assessments of substances used to manufacture FCMs involving the EFSA
- rules on labelling including an indication for use (e.g. as a coffee machine, a wine bottle) or by reproducing the appropriate symbol.
- for compliance documentation and traceability

EU Food Safety
Food Contact Materials
Legislation

Commission Regulation (EC) No 2023/2006 ensures that the manufacturing process is well controlled so that the specifications for FCMs remain in conformity with the legislation:

- premises fit for purpose and staff awareness of critical production stages
- documented quality assurance and quality control systems maintained at the premises, and
- selection of suitable starting materials for the manufacturing process with a view to the safety and inertness of the final articles

Good manufacturing rules apply to all stages in the manufacturing chain of food contact materials, although the production of starting materials is covered by other legislation.

EU Food Safety
Food Contact Materials
Legislation

Certain FCMs are covered by specific EU measures. There are also specific rules on some starting substances used to produce FCMs.

- ✓ Ceramic materials,
- ✓ Regenerated cellulose film,
- ✓ Plastics
- ✓ Recycled plastic)
- ✓ Active and intelligent materials

https://ec.europa.eu/food/safety/chemical_safety/food_contact_materials/legislation_en

EU Food Safety
Food Contact Materials
Legislation

III. Other Legislation

Legislation on Specific Substances

- ***Commission Regulation (EU) 2018/213*** - on the use of **bisphenol A** in varnishes and coatings intended to come into contact with food and amending Regulation (EU) No 10/2011 as regards the use of that substance in plastic food contact materials (Questions & Answers on BPA)
- ***Commission Regulation 1895/2005/EC*** - restricting use of certain **epoxy derivatives** in materials and articles intended to come into contact with food
- ***Commission Directive 93/11/EEC*** - release of **N-nitrosamines and N-nitrosatable** substances from rubber teats and soothers

EU Food Safety
Food Contact Materials
Authorized substances

Certain legislation on Food Contact Materials (FCM), such as the Regulation on plastic materials and articles, provides for **listing of substances**. Once these are listed they are permitted for use taking account of restrictions and specifications. Through this listing, these substances hence become 'authorised'.

For recycled plastics a very similar procedure is in place, although this authorises recycling processes via individual decisions.

EU Food Safety
Food Contact Materials
Authorized substances

The authorisation process consists of the following key steps:

- A business operator provide a **dossier** following the guidance provided by EFSA and send it to a competent authorities of the Member States.
- Via the Member State, EFSA receives the dossier. If the dossier is valid, **EFSA will evaluate it**, and provide an opinion on the safety of that substance taking account of its intended use
- The **Commission** will use the EFSA opinion as basis for deciding on its **authorisation**.
- The substance is authorised through an **amendment of the list of substances** under the applicable legislation. Once authorised, the substance can be used by everyone, subject to the restrictions set out in its authorisation. For recycling processes individual decisions are foreseen, addressed only to the applicant.
- The Commission must be immediately inform of any **new scientific or technical information**, which might affect the safety assessment of the authorised substance in relation to human.