

欧盟食品安全监控项目和法规介绍

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农残检测与欧盟农残法规



农药

- 防治病虫
- 调节生长
- 除去杂草



农药种类举例:

- 有机氯类, 如: DDT、硫丹、七氯、六六六、异狄氏剂等。
- 拟除虫菊酯类, 如: 联苯菊酯, 丙烯菊酯, 氰戊菊酯, 高效氯氰菊酯等。
- 有机磷类, 如乐果、杀扑磷、丙溴磷、毒死蜱、三唑磷、敌敌畏等。

残留物 residue definition:

由于使用农药而在食品、农产品和动物饲料中出现的任何特定物质，包括被认为具有毒理学意义的农药衍生物，如农药转化物、代谢物、反应产物和杂质等。

最大残留限量 maximum residue limit (MRL) :

在食品或农产品内部或表面法定允许的农药最大浓度，以每千克食品或农产品中农药残留的毫克数表示 (mg/kg) 。

再残留限量 extraneous maximum residue limit (EMRL) :

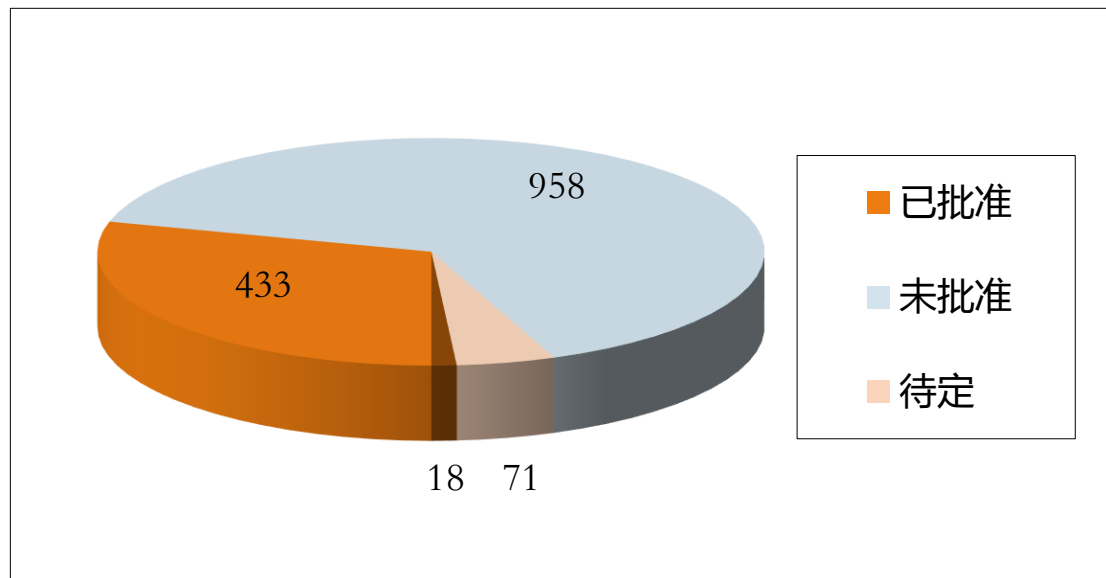
一些持久性农药虽已禁用，但还长期存在环境中，从而再次在食品中形成残留，为控制这类农药残留物对食品的污染而制定其在食品中的残留限量，以每千克食品或农产品中农药残留的毫克数表示 (mg/kg) 。

(EC)396/2005植物或动物源性食品和饲料中允许的农药最大残留限量

EC/1107/2009 欧盟关于植被保护产品上市的法规

➤ 欧盟进行评估所涉及的农药及活性成分共有1480种

(截至2024年7月)



EC/1107/2009 只是统一的农药准入性指令和法规，对于农药在产品中MRLs同样需要统一的法规进行管理。

EU MRLS是如何设置的?

申请人，例如植物保护产品的生产商、农民、进口商、欧盟或非欧盟国家，必须提交以下资料以设定农药的最高残留限量：

- ❑ 对作物使用的杀虫剂，例如植物的数量、频率、生长阶段（良好农业规范-GAP）；
- ❑ 根据GAP施用农药时预期残留量的实验数据；
- ❑ 农药的毒理学参考值

慢性毒性用每日允许摄入量（ADI）测量，急性毒性用急性参考剂量（ARfD）测量。



European Food Safety Authority (EFSA)通过所有可能使用该杀虫剂处理的食物摄入的残留物结合以上情况以及欧洲居民饮食结构等进行评估设立限量值。

(EC)396/2005植物或动物源性食品和饲料中允许的农药最大残留限量

- ❑ 大多针对新鲜作物设立
- ❑ 加工产品需考虑稀释或浓缩因子
- ❑ 默认值（一律限量）为0.01mg/kg
- ❑ 新鲜基质:
 - 葡萄：521项参数有指定限量；枸杞：518项；南瓜籽：512项；核桃：515项；苹果：538项（截至2024年7月数据）
- ❑ 常规农残，还有氯酸盐，尼古丁，环氧乙烷等



(EC)396/2005植物或动物源性食品和饲料中允许的农药 最大残留限量

- 食用葡萄=>葡萄=>浆果和小型水果=>水果
- 苹果=>核果类水果=>水果
- 核桃=>树坚果
- 枸杞(番茄)=>茄科和锦葵科=>Fruiting Vegetables果类
蔬菜
- 南瓜籽=>油籽类



(EC)396/2005植物或动物源性食品和饲料中允许的农药 最大残留限量



■ 方法

- 欧洲标准 EN
- 中国标准 GB



■ 基质

- 干/鲜水果、蔬菜和谷物
- 中草药和调味料
- 乳制品
- 茶叶
- 深加工食品
- 复杂基质食品
- 油、脂肪及高脂肪含量食品



■ 范围

LOQ的范围从5 μ g/kg到50 μ g/kg



据外媒报道，由于印度产芝麻原料掺杂未授权物质，接二连三的产品召回案件已席卷整个欧洲大陆。本次环氧乙烷预警事件最早发生在比利时，截至目前，已经涉及将近20个国家，其中包括奥地利、芬兰、法国、德国、爱尔兰、意大利、卢森堡、荷兰、挪威、波兰、斯洛伐克、西班牙、瑞典等。

环氧乙烷是一种具有遗传毒性的物质，经日常摄入可能致癌。由于芝麻原料中环氧乙烷残留量过高，比利时当地多家超市已经开始下架相关商品，包括面包和贝果等。政府部门已经发布公告，提醒已购买相关商品的消费者不要食用并及时退回购买点申请退款。

Ethylene oxide
(sum of ethylene
oxide and 2-
chloro-ethanol
expressed as
ethylene oxide)(F)



Reg. (EU)
2015/868

applicable

Ethylene oxide
(sum of ethylene
oxide and 2-
chloro-ethanol
expressed as
ethylene oxide)(F)



Reg. (EC) No
149/2008

previous

Code	Products to which MRLs apply		
0120110	● Walnuts	0.05*	0.1*
0130010	● Apples	0.02*	0.1*
0151010	● Table grapes	0.02*	0.1*
0231010	● Tomatoes	0.02*	0.1*
0401100	● Pumpkin seeds	0.05*	0.2*

氯酸盐、高氯酸盐

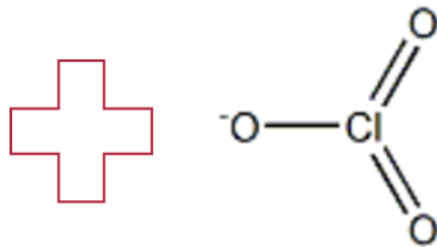


氯酸盐是含有氯酸根 (ClO_3^-) 的盐类,具有强氧化作用,易溶于水.在化学上有很高的稳定性,在工业上被广泛使用。

Na^+ ; Ca^{2+} ; Mg^{2+}



氯酸盐是一种常见的无机盐,广泛存在于自然界中,包括土壤、水源、空气等。



氯酸盐来源:

1. 食物中普遍残留的氯酸盐主要来自含氯的消毒剂与工业用途中的污染。
2. 蔬菜中氯酸盐含量可能是由于蔬菜生长的土壤或水源中含有氯酸盐, 导致蔬菜吸收了这些物质。
3. 在蔬菜的加工过程中, 可能会使用含氯酸盐的食品添加剂或者加工工具, 导致蔬菜中含有氯酸盐。

主要用途:

1. 在农业生产中被用作消毒剂、杀菌剂等, 以保证农作物的生长和质量。
2. 作为重要的无机化工原料, 广泛用于染料, 食品, 医药, 印染等行业。
3. 在能源行业中, 氯酸盐的创新应用还包括在储氢、电解水制氢、生物质能源生产等方面。



高氯酸盐



1. 损害消化系统



2. 高氯酸盐是一种强力甲状腺毒素，可能影响胎儿和婴儿的大脑发育。



3. 高氯酸盐主要存在于水果、蔬菜、茶叶、花草茶和婴儿食品中，对婴儿发育和人类生活产生影响。

高氯酸盐来源:

1. 高氯酸盐天然形式主要存在于土壤中,
2. 大多数高氯酸盐是商业生产的盐。

高氯酸盐主要存在于水果、蔬菜、茶叶、花草茶和婴儿食品中。

主要用途:

1. 高氯酸盐的主要用途是用作火箭、烟花和公路照明弹推进剂中的氧化剂，固体火箭燃料组分的高氯酸铵复合推进剂。
2. 可用于航天器、潜艇和其他需要可靠备用氧气供应的情况下的氧气蜡烛。

Chlorate (A) ⓘ
Reg. (EU)
2020/749
applicable

Code	Products to which MRLs apply	
0120110	● Walnuts	0.1
0130010	● Apples	0.05
0151010	● Table grapes	0.05
0231010	● Tomatoes	0.1
0401100	● Pumpkin seeds	0.05

污染物检测与欧盟污染物法规





第三章节

干燥、稀释、加工和复合食品

对于干燥、稀释、加工或复合食品(即由一种以上成分组成), 如果附件1中没有规定欧盟的具体最高限量, 则在将附件1中规定的最高限量应用于此类食品时, 应考虑以下方面:

- (a) 因干燥或稀释过程引起的污染物浓度变化;
- (b) 加工过程中引起的污染物浓度变化;
- (c) 产品中各成分的相对比例;
- (d) 检测定量限。



(EC) NO 2023/915—食品中污染物法规---黄曲霉毒素



产品	最大限量 (µg/kg)		说明
	黄曲霉毒素 B1	黄曲霉毒素总量 B1, B2, G1 ,G2	
干水果，在投放市场供最终消费者使用之前或作为食品成分使用之前，进行过分类或其他物理处理，除无花果干外	5.0	10.0	对于黄曲霉毒素的总和，最大水平是指下限浓度，它是在所有低于定量限值的值都为零的假设下计算的。
干水果用作唯一的配料或来源于干水果的加工产品，投放市场供最终消费者食用或用作食品配料，除无花果干外	2.0	4.0	如果食品仅以干果作为配料，或加工产品中至少有80%的成分来自干果，则为相应干果制定的最高含量也适用于这些产品。
无花果干	6.0	10.0	
坚果(花生)和其他油籽，在投放市场供最终消费者使用之前或作为食品成分使用之前进行分类或其他物理处理	8.0	15.0	用于粉碎和精制植物油生产的坚果(花生)和其他油籽除外。
坚果(花生)和其他油籽用作唯一的配料或来源于坚果(花生)和其他油籽的加工产品，投放市场供最终消费者使用或用作食品配料	2.0	4.0	用于生产精炼植物油的植物原油除外。 如果食品中只使用坚果(花生)和其他油籽作为配料，或者加工产品中至少有80%来自坚果(花生)和其他油籽，则为相应的坚果(花生)和其他油籽制定的最高含量也适用于这些产品。
树坚果，在投放市场供最终消费者使用之前或作为食品成分使用之前，进行过分类或其他物理处理，除杏仁、开心果外	5.0	10.0	如果对带壳的树坚果进行分析，在计算黄曲霉毒素含量时，假设所有污染都在可食用部分。
树坚果，用作唯一的配料或来源于干水果的加工产品，投放市场供最终消费者食用或用作食品配料，除杏仁、开心果外	2.0	4.0	如果对带壳的树坚果进行分析，在计算黄曲霉毒素含量时，假设所有污染都在可食用部分。 如果食品仅以树坚果为原料，或加工产品中至少有80%来自树坚果，则规定的树坚果最高含量也适用于这些产品。

苹果干
葡萄干

南瓜籽

核桃

赭曲霉毒素A	最大限量 (µg/kg)	
藤蔓类水果干 (currants, raisins and sultanas) 和无花果干	8.0	→ 葡萄干
其他水果干	2.0	→ 苹果干
葵花籽, 南瓜籽, (西)瓜子, 大麻籽, 大豆	5.0	→ 南瓜籽

(EC) NO 2023/915—食品中污染物法规—铅

铅	最大限量 (mg/kg)
蔓越莓, 醋栗, 接骨木莓和草莓树水果	0.20
除蔓越莓, 醋栗, 接骨木莓和草莓树水果外的其他水果	0.10
果类蔬菜 (除甜玉米外)	0.050

→ 苹果、葡萄

→ 枸杞

注: 适用于湿重 (wet weight) , 适用于洗涤和分离后的可食部分

干制品需要考虑浓缩因子

(EC) NO 2023/915—食品中污染物法规---镉

镉	最大限量 (mg/kg)	说明
柑橘类水果、梨类水果、核果、橄榄、猕猴桃、香蕉、芒果、木瓜和菠萝	0.020	适用于湿重 (wet weight) , 适用于洗涤和分离后的可食部分
浆果和小型水果类 (除树莓外) → 葡萄	0.030	
树莓	0.040	
除上述水果外其它水果 → 苹果	0.050	
松子	0.30	最高限量不适用于压榨和炼油用的树坚果, 前提是剩余的压榨树坚果不作为食品投放市场。如果剩余的压过的树坚果作为食品投放市场, 则适用最高水平, 并考虑加工过程中的变化
除松子外其它树坚果 → 核桃	0.10	
果类蔬菜 (除茄子外) → 枸杞	0.020	适用于湿重 (wet weight) , 适用于洗涤和分离后的可食部分
油籽类 (除油菜籽, 花生, 大豆等) → 南瓜籽	0.10	

(EC) NO 2023/915—食品中污染物法规---高氯酸盐

□ 高氯酸盐

新鲜果蔬：0.050mg/kg

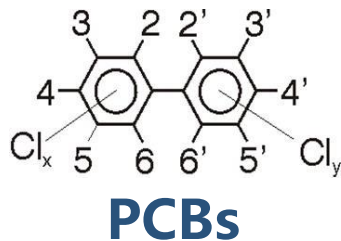
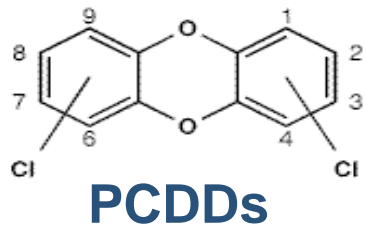
苹果、葡萄、枸杞

6.3	Perchlorate	Maximum level (mg/kg)	Remarks
▼ M2 ●			
6.3.1	Fruits and vegetables except products listed in 6.3.1.1, 6.3.1.2 and 6.3.1.3	0,05	
6.3.1.1	<i>Cucurbitaceae</i> and kale	0,10	
6.3.1.2	Leaf vegetables and herbs	0,50	
6.3.1.3	Beans (<i>Phaseolus vulgaris</i>) with pods	0,15	
▼ B ●			
6.3.2	Tea (<i>Camellia sinensis</i>) (dried product) Herbal and fruit infusions (dried product) and ingredients used for herbal and fruit infusions (dried products)	0,75	'Herbal infusions (dried product)' refers to: — herbal infusions (dried product) from flowers, leaves, stalks, roots, and any other parts of the plant (in sachets or in bulk) used for the preparation of herbal infusion (liquid product); and — instant herbal infusions. In the case of powdered extracts, a concentration factor of 4 has to be applied.
6.3.3	Infant formulae, follow-on formulae, food for special medical purposes intended for infants and young children ⁽³⁾ and young-child formulae ⁽⁴⁾	0,01	The maximum level applies to the products ready to use (placed on the market as such or after reconstitution as instructed by the manufacturer).
6.3.4	Baby food ⁽³⁾	0,02	The maximum level applies to the products ready to use (placed on the market as such or after reconstitution as instructed by the manufacturer).
6.3.5	Processed cereal-based food ⁽³⁾	0,01	The maximum level applies to the product as placed on the market.

什么是二噁英?

狭义上的“二噁英”

- ✓ „二噁英 “ = 多氯二苯并对二噁英和多氯二苯并呋喃
- ✓ 210种不同的“同源物”，含1-8个氯原子
- ✓ 根据欧盟食品/饲料法，相关内容：
17种有毒同源物（2, 3, 7, 8-替代物）
- ✓ 多氯二苯并对二噁英=多氯二苯并（对）二噁英
多氯二苯并呋喃=多氯二苯并呋喃



广义上的“二噁英”

- ✓ “多氯联苯”
- ✓ 209种不同的“同源物”
- ✓ 根据欧盟食品/饲料法，相关内容：
12种具有二噁英样毒理学特性的多氯联苯（“类二噁英多氯联苯”，简称DL-PCB）（其中：4种非邻位多氯联苯，8种单邻位多氯联苯）
- ✓ 6 具有非二噁英毒理学特性的多氯联苯（非二噁英样多氯联苯（简称NDL-PCB，也称为：标记或ICES6-多氯联苯）

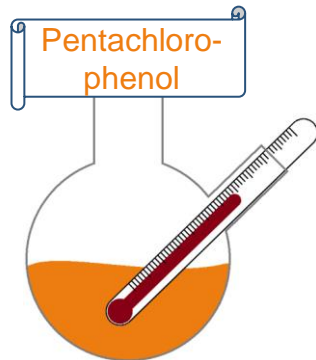


来自人类文明的
副产品



燃烧过程

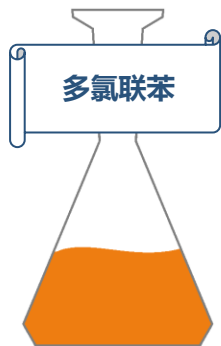
垃圾焚烧、家用炉子
火灾
热工业过程
金属冶炼/生产
金属回收



化工过程产生，例如：

氯（氯碱工艺）
氯化酚、氯化苯、多氯联苯
颜料，如对氯苯、呋唑紫
氯漂白（纸）

二噁英的主要来源：多氯联苯身边处处可见



多氯联苯性质：

高化学稳定性
高热稳定性
高疏水性
不导电，阻燃



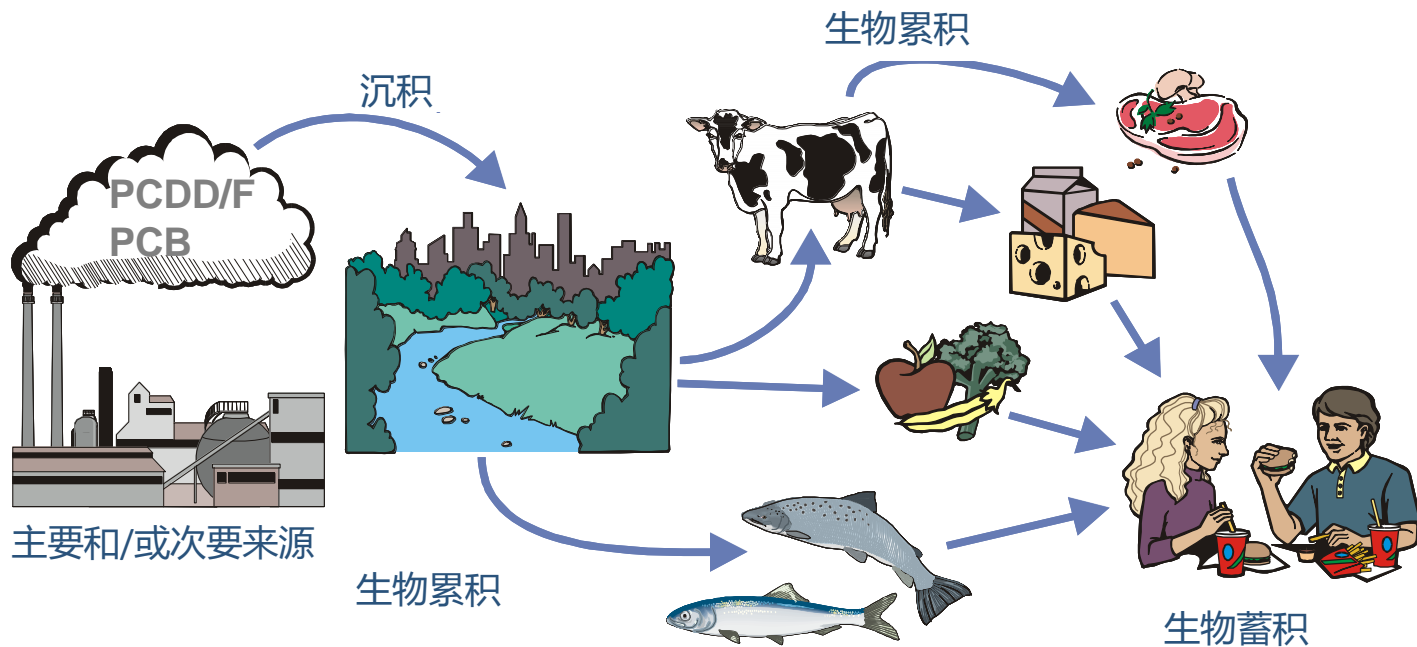
应用领域

隔离液（变压器、电容器）
液压油，钻井油，润滑剂
建筑材料添加剂（如密封胶、
粘合剂、颜料）

→ 自 1920 年代初以来，全球超过 100 万吨！



二噁英的主要来源：污染途径



鱼, 肉, 蛋, 奶, 油脂, 婴幼儿食品等

4		Halogenated persistent organic pollutants			
4.1	Dioxins and PCBs	Maximum level			Remarks
		Sum of dioxins (pg WHO-PCDD/F-TEQ/g) ⁽¹⁵⁾	Sum of dioxins and dioxin-like PCBs (pg WHO-PCDD/F-PCB-TEQ/g) ⁽¹⁵⁾	Sum of non dioxin-like PCBs (ng/g) ⁽¹⁵⁾	Sum of non dioxin-like PCBs is of PCB28, PCB52, PCB101, PCB138, PCB153 and PCB180 (ICES - 6). Maximum levels refer to upper bound concentrations, which are calculated on the assumption that all the values of the different congeners below the limit of quantification are equal to the limit of quantification.
▼M6↓					
4.1.1	Meat and meat products except edible offal and products listed in 4.1.3 and 4.1.4 ⁽²⁾				The maximum level expressed on fat does not apply to food containing less than 2 % fat. For food containing less than 2 % fat, the maximum level applies on a product basis. This maximum level is calculated using this formula: Maximum level expressed on a product basis (for food containing less than 2 % fat) = maximum level expressed on fat (for that food) × 0,02.
▼B↓					
4.1.1.1	of bovine, ovine and caprine animals	2,5 pg/g fat	4,0 pg/g fat	40 ng/g fat	
4.1.1.2	of pigs	1,0 pg/g fat	1,25 pg/g fat	40 ng/g fat	
4.1.1.3	of poultry	1,75 pg/g fat	3,0 pg/g fat	40 ng/g fat	

欧盟法规

2013/711/EU: Action level, 若超过此行动水平, 工厂需调查并采取措降低二噁英含量。

FOOD	ACTION LEVEL FOR DIOXINS + FURANS (WHO-TEQ) (1)	ACTION LEVEL FOR DIOXIN-LIKE PCBS (WHO-TEQ) (1)
Meat and meat products (excluding edible offal) (2) of the following animals		
— bovine animals and sheep	1,75 pg/g fat (2)	1,75 pg/g fat (2)
— poultry	1,25 pg/g fat (2)	0,75 pg/g fat (2)
— pigs	0,75 pg/g fat (2)	0,50 pg/g fat (2)
Mixed fats	1,00 pg/g fat (2)	0,75 pg/g fat (2)
Muscle meat of farmed fish and farmed fishery products	1,50 pg/g wet weight	2,50 pg/g wet weight
Raw milk (2) and dairy products (2), including butter fat	1,75 pg/g fat (2)	2,00 pg/g fat (2)
Hen eggs and egg products (2)	1,75 pg/g fat (2)	1,75 pg/g fat (2)
Clays as food supplement	0,50 pg/g wet weight	0,50 pg/g wet weight
Cereals and oilseeds	0,50 pg/g wet weight	0,35 pg/g wet weight
Fruits and vegetables (including fresh herbs) (4)	0,30 pg/g wet weight	0,10 pg/g wet weight

← 南瓜籽

← 新鲜苹果、葡萄、枸杞

矿物油测试



矿物油

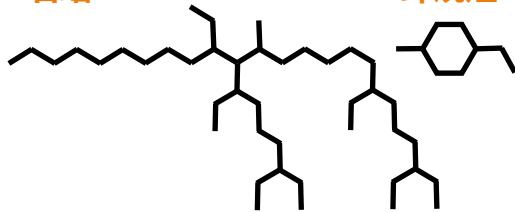
由石油所得精炼液态烃的混合物，主要分饱和烃矿物油与芳香烃矿物油。
将原油经常压和减压分馏、溶剂抽提和脱蜡，加氢精制而得。

MOSH

饱和烃矿物油

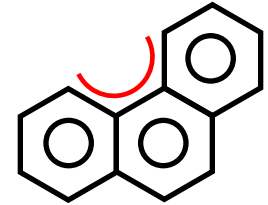
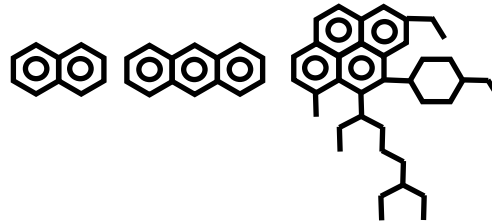
石蜡

环烷烃

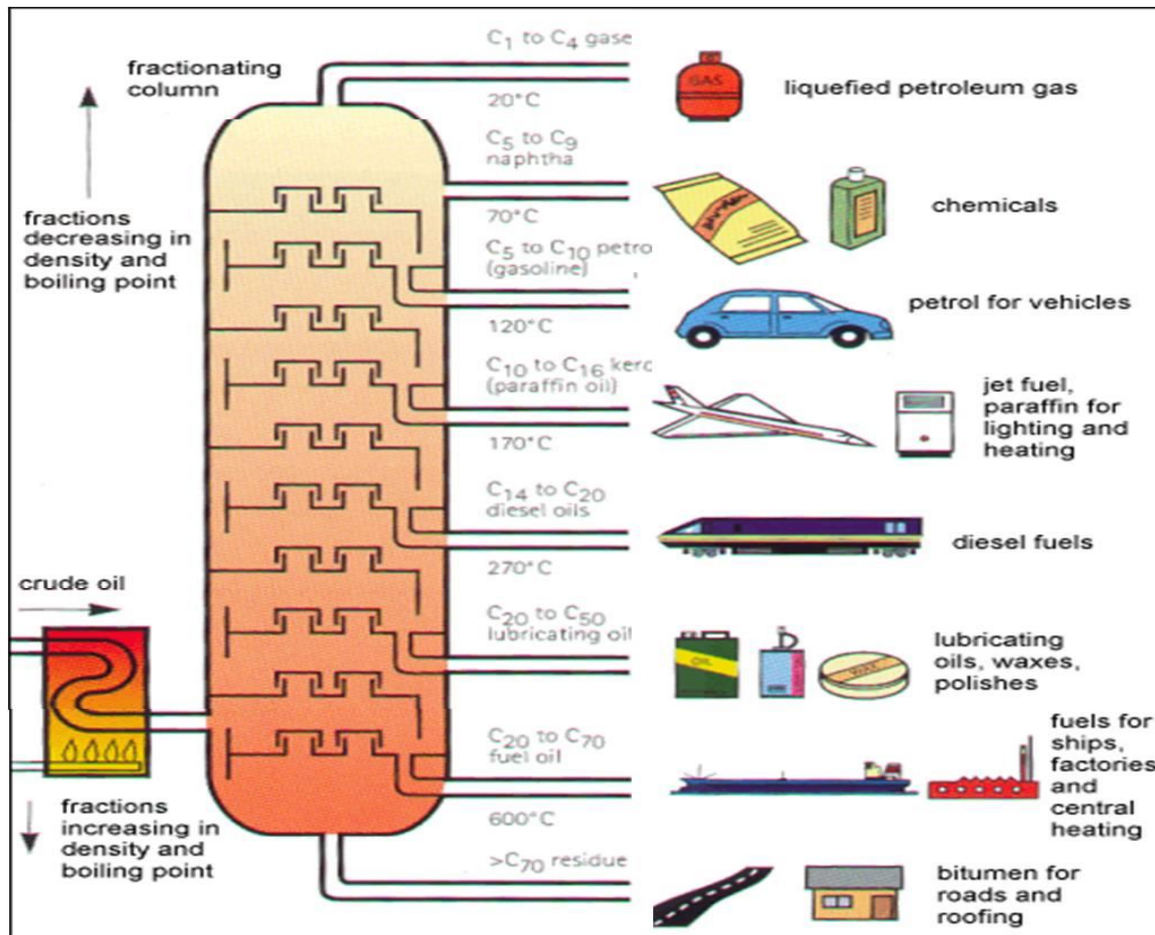


MOAH

芳香烃矿物油



矿物油检测



矿物油污染源

含有打印油墨的可回收纸板



胶粘剂



塑料制品



涂有配料油的黄麻/剑麻袋



矿物油污染来源

收获、运输或干燥产生的燃料或烟尘



含有凡士林、石蜡的护肤品



润滑油



处理剂，如灰尘粘合剂、脱模剂

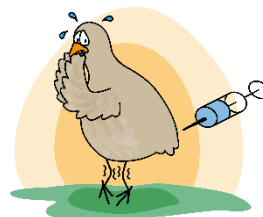


表面处理剂，如水果涂蜡



疫苗溶剂 (残留物)

农药制剂 (残留物)



欧盟其它法规介绍



What are food additives?

EU:

本身不作为食品使用，也不是正常食品的某种特征成分，不论其是否具有营养价值，为了某种技术目的，在食品制造、加工、配制、处理、包装、运输和储存过程中人为加入食品中，会导致或者可以预期该食品添加剂或其副产物会直接或间接成为食品一部分的物质。

欧盟定义了27种功能性的食品添加剂， 举例：

- Colours – they are used to add or restore colour in a food 着色剂
- Preservatives – these are added to prolong the shelf-life of foods by protecting them against micro-organisms 防腐剂
- Antioxidants – substances which prolong the shelf-life of foods by protecting them against oxidation (i.e. fat rancidity and colour changes) 抗氧化剂
- Flour treatment agents – added to flour or to dough to improve its baking quality 面粉改良剂

Are food additives safe?

The safety of all food additives that are currently authorised has been assessed by the Scientific Committee on Food (SCF) and/or the European Food Safety Authority (EFSA). Only additives for which the proposed uses were considered safe are on the EU list.

欧盟对食品添加剂采取上市前审批制度，只有通过审批并列入食品添加剂清单中的添加剂才允许流入市场中。（EC）No1331/2008《食品添加剂、食品酶和食品香料的通用审批程序》规定了食品添加剂、酶制剂和香料的一般审批程序，明确了若对现有的食品添加剂申请新的用途以及申请使用新的食品添加剂时，申请者应向欧盟委员会提交正式申请，所有允许使用的食品添加剂都要经过欧盟食品安全局（EFSA）和食品科学委员会（SCF）的风险评估。

欧盟食品添加剂法规--- (EC) NO 1333/2008

食品添加剂数据库

<https://ec.europa.eu/>

- > 4.1 Unprocessed fruit and vegetables
- ▼ 4.2 Processed fruit and vegetables
 - 4.2.1 Dried fruit and vegetables
 - 4.2.2 Fruit and vegetables in vinegar oil or brine
 - 4.2.3 Canned or bottled fruit and vegetables
 - > 4.2.4 Fruit and vegetable preparations excluding products covered by 5.4
 - > 4.2.5 Jam jellies and marmalades and similar products

Additives linked to this subcategory:

E 131	Patent Blue V	ML = 200 mg/kg, only preserves of red fruit
E 133	Brilliant Blue FCF	ML = 200 mg/kg, only preserves of red fruit
E 140	Chlorophylls and Chlorophyllins	quantum satis only preserves of red fruit ML = 50 mg/kg, only dried coconut ML = 50 mg/kg, only white vegetables, processed, including pulses ML = 100 mg/kg, only dried mushrooms ML = 150 mg/kg, only dried ginger ML = 200 mg/kg, only dried tomatoes
E 220 - 228	Sulphur dioxide - sulphites	ML = 400 mg/kg, only white vegetables, dried ML = 500 mg/kg, only dried fruit and nuts in shell excluding dried apples, pears, bananas, apricots, peaches, grapes, prunes and figs ML = 600 mg/kg, only dried apples and pears ML = 1000 mg/kg, only dried bananas ML = 2000 mg/kg, only dried apricots, peaches, grapes, prunes, and figs
E 141	Copper complexes of chlorophylls and chlorophyllins	quantum satis only preserves of red fruit
E 162	Beetroot Red, betanin	quantum satis only preserves of red fruit
E 150a-d	Caramels	quantum satis only preserves of red fruit

1.19 Precut fruit (ready-to-eat)

1.20 **→M9 ↓** Unpasteurised fruit and vegetable juices (ready-to-eat) **→**

2.5 Vegetables, fruits and products thereof

Food category	Food category	Micro-organisms/their toxins, metabolites	Sampling plan (1)		Limits (2)		Analytical reference method (3)	Stage where the criterion applies
			n	c	m	M		
2.5.1 Precut fruit and vegetables (ready-to-eat)	1.1 Ready-to-eat foods intended for infants and ready-to-eat foods for special medical purposes (4)	<i>Listeria monocytogenes</i>	10	0	→M9 ↓ Not detected in 25 g		EN/ISO 11290-1	Products placed on the market during their shelf-life
2.5.2 Unpasteurised (3) vegetable juices (ready-to-eat) →	1.2 Ready-to-eat foods able to support the growth of <i>Listeria monocytogenes</i> , other than those intended for infants and for special medical purposes	<i>Listeria monocytogenes</i>	5	0	100 cfu/g (5)		EN/ISO 11290-2 (6)	Products placed on the market during their shelf-life
n = number of samples			5	0	→M9 ↓ Not detected in 25 g (1)		EN/ISO 11290-1	Before the food has left the immediate control of the food business operator, who has produced it
The term unpasteurised combinations or types of products	1.3 Ready-to-eat foods unable to support the growth of <i>Listeria monocytogenes</i> , other than those intended for infants and for special medical purposes (4) (6)	<i>Listeria monocytogenes</i>	5	0	100 cfu/g		EN/ISO 11290-2 (6)	Products placed on the market during their shelf-life

Foods & food ingredients authorised for irradiation in the EU


Currently, these are:

- Fruit and vegetables including root vegetables
- Cereals, cereal flakes, rice flour
- Spices, condiments
- Fish, shellfish
- Fresh meats, poultry, frog legs
- Raw milk camembert
- Gum arabic, casein/caseinates, egg white
- Blood products

ANNEX

FOODSTUFFS AUTHORISED FOR IRRADIATION TREATMENT AND MAXIMUM RADIATION DOSES

Category of foodstuff	Maximum overall average absorbed radiation dose (kGy)
Dried aromatic herbs, spices and vegetable seasonings	10

The list of Member States' authorisations of food and food ingredients which may be treated with ionising radiation is [available here](#) .

ANNEX

Pharmacologically active substances and their classification regarding maximum residue limits (MRL)

Table 1
Allowed substances

Pharmacologically active Substance	Marker residue	Animal Species	MRL	Target Tissues	Other Provisions <i>(according to Article 14(7) of Regulation (EC) No 470/2009)</i>	Therapeutic Class
Abamectin	Avermectin B1a	Bovine	10 µg/kg 20 µg/kg	Fat Liver	NO ENTRY	Antiparasitic agent acting against ectoparasites
		Ovine	20 µg/kg 50 µg/kg 25 µg/kg 20 µg/kg	Muscle Fat Liver Kidney	Not for use in animals from which milk is produced for human consumption.	
<i>Absinthium</i> extract	NOT APPLICABLE	All food producing species	No MRL required	NOT APPLICABLE	NO ENTRY	NO ENTRY

□ 营养标签标示法规--- (EU) No 1169/2011

强制标示信息：食品名称、成分表、净含量、产生日期、原产国等。

营养成分表：能量、脂肪、饱和脂肪、碳水化合物、糖、蛋白质和盐等强制标示信息，和维生素、矿物质、不饱和脂肪酸、膳食纤维等非强制标示信息

过敏原信息：麸质、大豆、坚果、软体动物、二氧化硫（10mg/kg）等14种过敏原标示要求

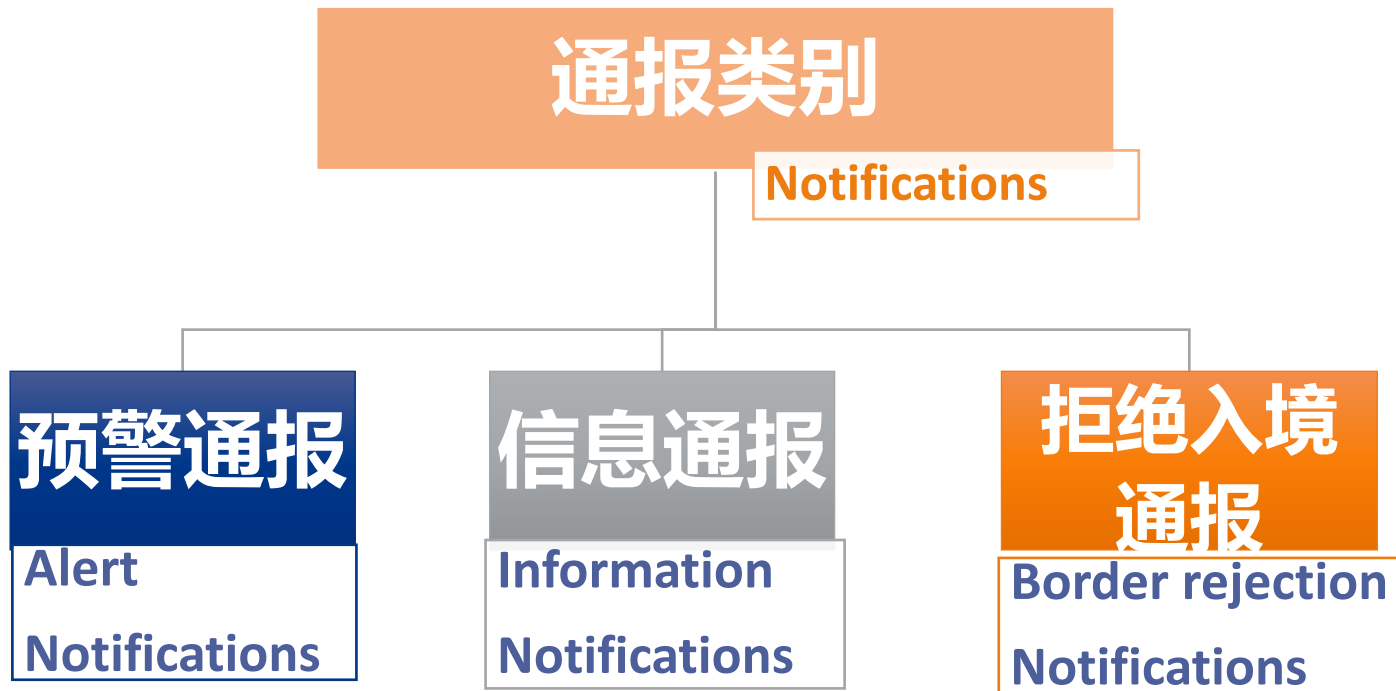
□ 营养和健康宣称----(EU) No 1924/2006

“低脂” “无脂” “低糖” “无糖” 等

欧盟快速预警通报 (RASFF)



RASFF: Rapid Alert System for Food and Feed 欧盟食品和饲料快速预警系统








欧盟快速预警通报 (RASFF) ---南瓜籽 (11起)

reference	subject	classification	risk_decision
2024.5433	Salmonella in pumpkin seeds	alert notification	serious
2024.5423	Salmonella in sunflower seeds, pumpkin seeds and pine nut salad mix	alert notification	serious
2024.5071	shigatoxin-producing Escherichia coli in organic pumpkin seeds from Poland	alert notification	potentially serious
2024.4865	traces of peanut in gluten-free pumpkin seeds	alert notification	serious
2024.3918	Pesticide residues of pyraclostrobin in pumpkin seeds from China	border rejection notification	no risk
2024.2749	Unauthorised pesticide residue (isoprocab) in pumpkin seed kernels from China via Netherlands..	border rejection notification	potentially serious
2023.6482	Lack of labelling on dried fruit bars with pumpkin seeds and dried apricots	alert notification	serious
2023.4147	Salmonella in pumpkin seeds from Togo	alert notification	serious
2022.6057	unauthorised substance isoprocab in pumpkin seeds from China	border rejection notification	undecided
2022.2028	Salmonella in pumpkin seeds from China	alert notification	serious
2022.0330	Salmonella in pumpkin seeds from China	alert notification	serious

1起产志贺毒素大肠杆菌, 5起沙门氏菌, 3起农残, 1起过敏原, 1起标识缺失 (2022-2024)

欧盟快速预警通报 (RASFF) ---葡萄干 (48起)

reference	subject	classification	risk_decision
2024.6071	przekroczenie NDP ochratoxyny A w rodzynekach sułtańskich // exceedance of MRL for ochratoxin A in sultana raisins from Türkiye	information notification for attention	serious
2024.5165	Chlorpyrifos in raisins from Iran via Türkiye	border rejection notification	potential risk
		information notification for	

Ref. ↓ ↑	Category ↓ ↑	Type ↓ ↑	Subject ↓ ↑	Date ↓ ↑	Origin	Notifying ↓ ↑	Class. ↓ ↑	Decision ↓ ↑	
2023.1181	Fruits and vegetables	food	Mineral oil in sultana raisins from Iran, packaged in the Czech Republic	17 FEB 2023		 Czech Republic	information notification for follow-up	potential risk	Details >>
2022.4151	Fruits and vegetables	food	Presence of mineral oil in raisins from Slovakia	15 JUL 2022		 Czech Republic	information notification for follow-up	not serious	Details >>
2022.1863	Fruits and vegetables	food	Presence of mineral oil in raisins unknown origin via Slovakia	29 MAR 2022	---	 Czech Republic	information notification for follow-up	undecided	Details >>
2024.3293	Salmonella spp in raisins from Türkiye						information notification for attention	serious	
2023.8942	Pesticide residues in raisins from Iran						border rejection notification	serious	
2023.4986	Ochratoxin A (23 µg/kg) in raisins from China						information notification for attention	potentially serious	

节选

19起赭曲霉毒素, 22起农残, 3起二氧化硫, 3起矿物油, 1起沙门氏菌 (2022-2024)

欧盟快速预警通报 (RASFF) ---枸杞 (5起)

reference	subject	classification	risk_decision
2023.8573	Detection of irradiation in dried goji berries from China	information notification for follow-up	potential risk
2021.1244	Carbofuran in Bacche di GOJI	information notification for attention	serious
2021.0701	residu on Goji berries from China	border rejection notification	serious
2020.1075	hexaconazole e carbofuran in bacche di goji	alert notification	serious
2020.0051	propargite and carbofuran in goji berries from China	border rejection notification	undecided

1起辐照, 4起农残 (2020-2024)

欧盟快速预警通报 (RASFF) ---核桃 (14起)

reference	subject	classification	risk_decision
2024.5930	Salmonella spp. in walnut kernels from the United States	information notification for attention	serious
2024.5332	Salmonella spp. in walnut kernels (raw material) from the United States	information notification for attention	serious
2024.4306	absence of health certificate for shelled walnuts from Ukraine	information notification for follow-up	not serious
2024.3980	Oxidative rancidity in walnut kernels from Germany	information notification for follow-up	not serious
2024.3286	Salmonella spp. in walnut kernels from the United States, via the Netherlands	information notification for attention	serious
2024.3088	Oxidative rancidity in walnut kernels from USA	information notification for follow-up	not serious
2024.1504	Salmonella ssp. in walnut kernels (raw material) from the United States	information notification for attention	serious
2024.0475	Inappropriate organoleptic characteristics of walnuts in shell origin from USA	information notification for follow-up	not serious
2024.0119	Dead insects in unshelled walnuts from France	information notification for follow-up	not serious
2023.8835	Salmonella in Walnut from United Status	alert notification	serious
2023.6941	Oxidative rancidity in walnut kernels from Romania	information notification for follow-up	not serious
2023.6061	Salmonella spp. in walnut kernels from the USA	information notification for attention	serious
2023.4834	Salmonella spp. in walnut kernels (raw material) from the United States, via Italy	information notification for attention	serious
2023.2515	Aflatoxins in walnut kernel pieces from Ukraine, via Romania	alert notification	serious

7起沙门氏菌, 1起感官指标异常, 1起黄曲霉毒素,3起氧化酸败, 1起健康证明缺失和1起昆虫异物 (2023-2024)

