



Food Contact Material Recall Notifications - 2023 report 1

Food safety closely relates to food contact materials (FCM). With the development of FCM, kinds of safety problems accompany to appear too. Many countries lay down strict requirements to regulate FCM, such as EU, and it also build a special warning systems to exchange information about measures taken responding to serious risks detected in FCM.

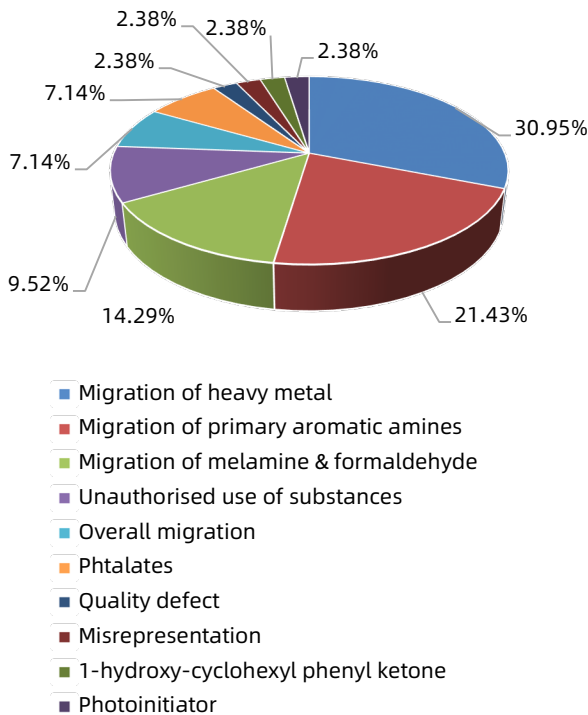
This report summarizes the notifications of food contact materials from Rapid Alert System for Food and Feed (RASFF) of the European Union in the first quarter of 2023. There were total 38 notifications in the first quarter of 2023 with **24 notifications for Chinese products**. The analysis is as follows:

1. Analysis of the reason for the notification

The reasons for the notifications in the first quarter mainly included chemical risks, the use of unauthorized substances and procedure documents. Among these notifications, the largest number of notifications were caused by the chemical risk, in which the excessive migration of heavy metal was notified the most, 13 times in total, accounting for about 26.67%. The second is the excessive migration of primary aromatic amines, a total of 9 times, accounting for about 21.43%.

See Figure 1 for details.

Figure 1 Distribution of the number of notification reasons (times) and their proportions



◆ Reason for notification "ranking list"

■ No. 1: Migration of heavy metal (30.95%)

Analysis: The main notified products are ceramic, glass and metal products. The raw materials of these products mainly come from minerals. Poor mineral raw materials may contain a lot of harmful heavy metals. Secondly, the substandard processing technology may also lead to the easy dissolution of heavy metals in products.

■ No. 2: Migration of primary aromatic amines (21.43%)

Analysis: The presence of additives (such as azo) or monomer residues (such as nylon products) in food contact materials may produce primary aromatic amines. After the (EU) No. 2020/1245 was issued, the detection limit of 23 primary aromatic amines dropped to 0.002mg/kg, causing the above-mentioned high-risk materials to easily fail.

■ No. 3: Migration of melamine & formaldehyde (14.29%)

Analysis: The main recalled products are melamine tableware and bamboo fiber tableware made of melamine, bamboo, a mixture of corn starch and bamboo fiber. Melamine resin is mainly polymerized by melamine and formaldehyde monomers. Inferior melamine materials will release a large amount of free formaldehyde and melamine monomers.

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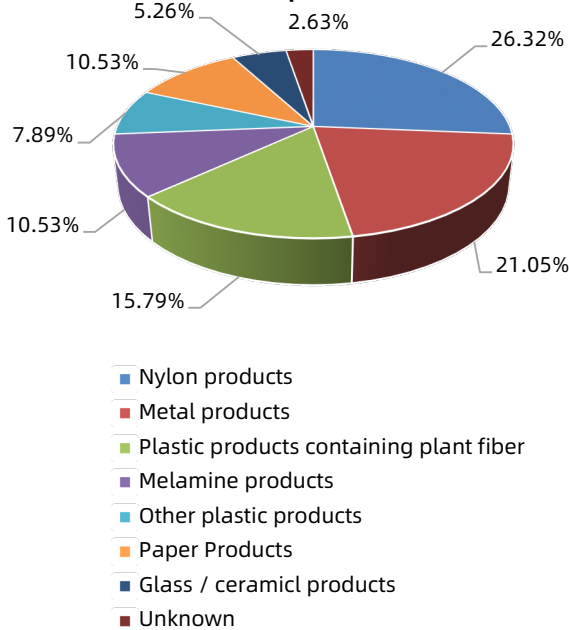
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2. Analysis of the Products for the notification

Figure 2 Distribution of notified materials and products



◆ Materials and products for notification "ranking list"

■ No. 1: Nylon product (26.32%)

Analysis: Polyamide, commonly known as nylon, is a general term of thermoplastic resin containing repeated amide group - [nhco] - in the main chain of molecule, including aliphatic PA, aliphatic aromatic PA and aromatic PA. Nylon monomers are the most common source of primary aromatic amines.

■ No. 2: Metal products (21.05%)

Analysis: The main reasons for the unqualified metal products are that the metal products manufacturers used inferior metal raw materials or recycled scrap metal; In the process of manufacturing metal products, the operation is not standardized, the process is immature and unstable.

■ No. 3: Products containing plant fiber (15.79%)

Analysis : Products containing plant fiber are made of melamine, bamboo, corn starch and bamboo fiber. After the bamboo fiber research report was released in June 2020, most EU countries began to ban the import of products made of bamboo fiber and similar materials. Secondly, this kind of products usually contain a lot of melamine material, which is also easy to cause a large number of formaldehyde & melamine to move out.

3. Analysis of the Countries for the notification

In the first quarter of 2023, there were 38 notifications of contact materials, of which 24 cases were notified for Chinese products, accounting for 63.16%. In terms of countries issuing notifications, there were 11 countries in the first quarter. Among them, Spain, France, and Italy have the highest number of notifications, all of which have initiated 7 notifications, accounting for 18.42% of the total number of notifications. Poland and Germany have also initiated 4 notifications, accounting for 10.52% of the total number of notifications

See Figure 3 & Figure 4 for details.

Figure 3 Notification of Chinese products

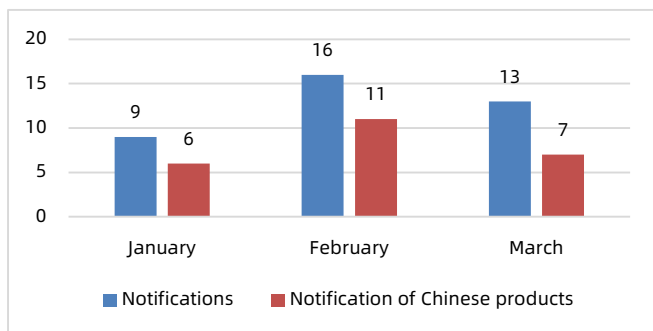
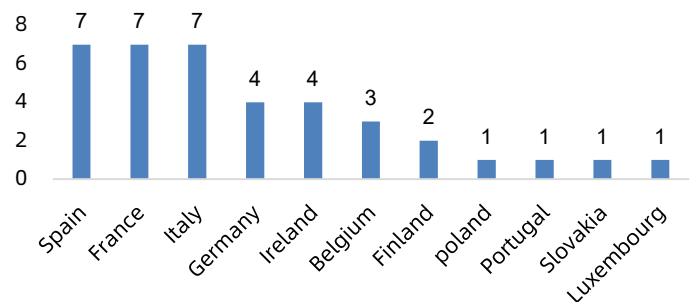


Figure 4 Number of notifications by countries



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Appendix: The relevant limit requirements of the notification of chemical risk :

Items	Law/Standard /Command	Limits	Material/Products
Migration of primary aromatic amines	(EU)No 10/2011 and its amendments	Not detected	Plastic product (nylon)
Unauthorised use of substances	(EU)No 10/2011 and relevant requirements of member states	disable	Products containing plant fiber
Migration of formaldehyde	(EU)No 10/2011 and relevant requirements of member states,(EU)No 284/2011	15mg/kg	Bamboo fibreproduct, Plastic product (melamine & other)
Migration of melamine		2.5mg/kg	
Overall migration	(EU)No 10/2011 and relevant requirements of member states	60mg/kg or 10mg/dm ²	Plastic product
Phtalates	Fiche MCDA n°4 (V02-01/01/2019)	DEHP:0.3mg/kg BBP:3mg/kg DBP+DIBP:0.012mg/kg DINP+DIDP:0.9mg/kg	Paper Products
Lead		0.010 mg/kg	
1-hydroxy-cyclohexyl phenyl ketone		Not detected	
Overall migration	Decree of 21 March 1973 and Ministry of health Decree of 21 November 2015, No.195 Decree No. 72 of May 9, 2019	8mg/dm ²	Metal products (oven metal frame, baking pan, frying pan)
Nickel		0.1mg/kg	
Chromium,			
Manganese			
Arsenic	Fiche MCDA N°2 (V01-01/05/2016)	Not detected	Ceramic casserole
Aluminum		1 mg/kg	
Cobalt		0.02mg/kg	

Referenced Websites:

- <https://webgate.ec.europa.eu/rasff-window/portal/?event=SearchForm&cleanSearch=1>

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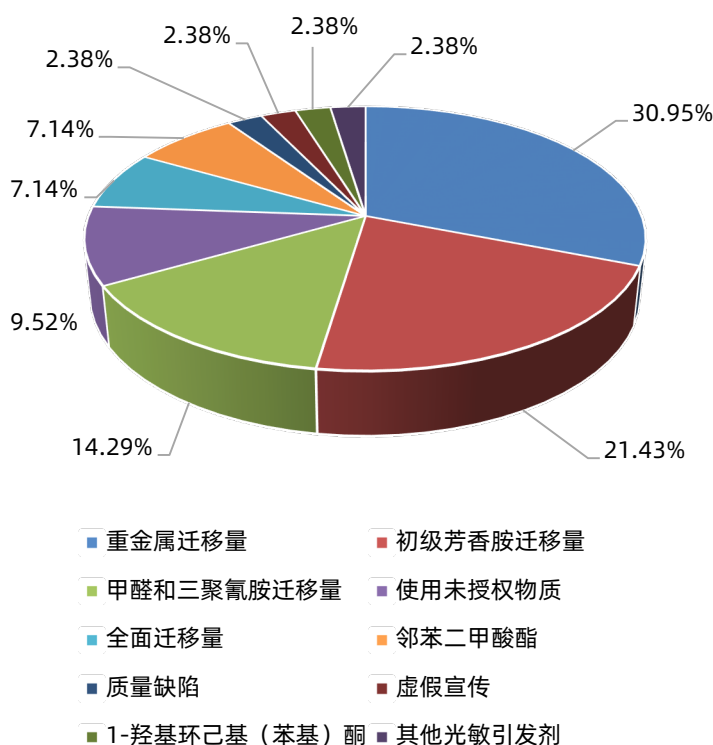
食品安全离不开食品接触材料的安全。随着科技的发展，食品接触材料的种类日益增多，由此引发的安全问题也不断出现。欧盟对各类食品接触材料都有严格的法规进行管控，并建立了一定的预警通报机制，对于不符合法规要求的产品采取相应的处罚措施。

本期汇总了2023年第1季度来自欧盟食品和饲料类快速预警系统（RASSF）的食品接触材料通报信息，共计38例，其中24例针对中国产品，分析如下：

1. 通报原因分析

本期通报的原因主要分为有害化学风险、使用未授权物质和程序文件三类。其中，由化学风险的使用引起的通报最多，其中重金属迁移量超标的通报最多，共13次，占30.95%；其次是初级芳香胺迁移量超标，共9次，占21.43%。详见图1。

图1 通报原因数量（次）占比分布图



◆ 通报原因“排行榜”

■ No. 1: 重金属迁移量（占比30.95%）

风险分析：主要通报产品为陶瓷、玻璃及金属制品。这些产品原材料主要来源于矿物。劣质矿物原料可能含有大量有害重金属物质。其次，加工工艺不达标也可能导致产品中重金属容易溶出。

■ No. 2: 初级芳香胺迁移量（占比21.43%）

风险分析：食品接触材质中存在特定的添加剂（如偶氮色粉）或单体残留物（如尼龙制品）都可能产生初级芳香胺。欧盟塑料新法规（EU）No. 2020/1245中初级芳香胺的检出限下降到0.002mg/kg，导致上述高风险材质容易出现不合格情况。

■ No. 3: 甲醛和三聚氰胺迁移量（占比14.29%）

风险分析：主要召回产品为密胺餐具以及由密胺、竹子以及玉米淀粉和竹纤维混合材料制成的竹纤维餐厨具。密胺树脂主要由三聚氰胺和甲醛单体聚合而成，劣质的密胺材料会释放出大量游离的甲醛和三聚氰胺单体。

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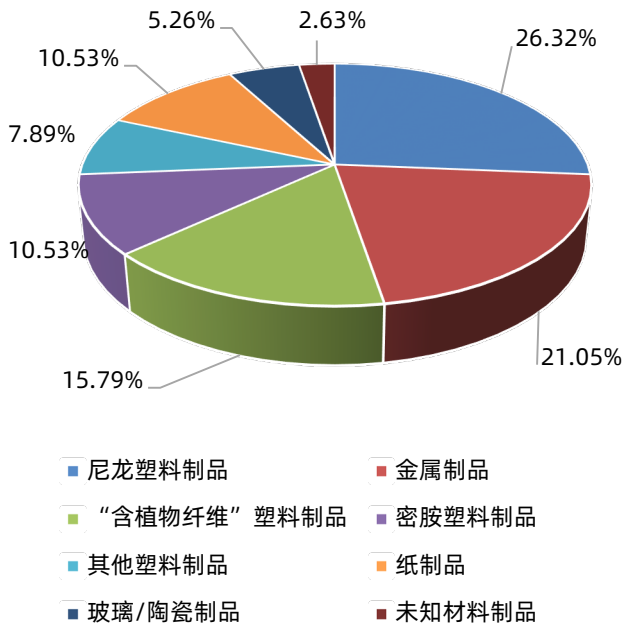
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2. 通报产品分析

图2 通报产品分布图



◆ 通报制品 “排行榜”

■ No. 1: 尼龙塑料制品 (占比26.32%)

风险分析: 聚酰胺俗称尼龙 (Nylon), 英文名称Polyamide (简称PA), 是分子主链上含有重复酰胺基团-[NHCO]-的热塑性树脂总称, 包括脂肪族PA, 脂肪-芳香族PA和芳香族PA。尼龙聚合单体是初级芳香胺最常见的来源。

■ No. 2: 金属制品 (占比21.05%)

风险分析: 金属制品不合格原因主要为, 金属制品的生产企业使用了劣质的金属原料或回收的废金属料; 在制造金属产品过程中, 操作不规范, 工艺不成熟、不稳定等。

■ No. 3: “含植物纤维”塑料制品 (占比15.79%)

风险分析: 含植物纤维制品大多由密胺、竹子以及玉米淀粉和竹纤维混合材料制成。2020年6月竹纤维研究报告发布后, 大多数欧盟国家开始禁止含有竹纤维及类似材质制成的产品进口。其次, 这类产品通常含有大量的密胺材质, 也容易导致甲胺迁移量和三聚氰胺迁移量超标。

3. 通报国家分析

本期通报案例共计38例, 其中, 来自中国的产品被通报案例共24例, 占比为63.16%。发布通报的国家方面, 本季度共有11个国家。其中, 最多的是西班牙、法国和意大利, 均发起通报7例, 均占通报总数的18.42%, 其次是德国与爱尔兰, 均发起通报4例, 均占通报总数的10.52%。

图3 对华产品通报情况

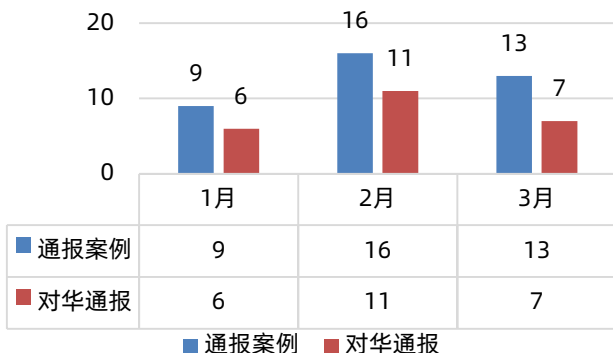
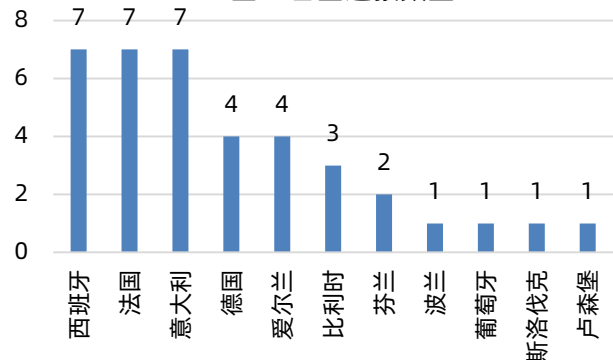


图4 各国通报数量



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附录：通报化学项目中需注意相关限值要求：

项目名称	法规/标准/指令	限值	材料/产品
初级芳香胺迁移量	(EU)No 10/2011及其修订案	未检出	塑料制品（尼龙制品）
未授权物质	(EU)No 10/2011及成员国相关要求	禁用	含植物纤维制品
甲醛迁移量	(EU)No 10/2011及其修订案； (EU)No 284/2011	15mg/kg	含竹纤维制品、 塑料制品(密胺&其他)
三聚氰胺迁移量		2.5mg/kg	
全面迁移量	(EU)No 10/2011及其修订案	60mg/kg or 10mg/dm ²	塑料制品
邻苯二甲酸酯	Fiche MCDA n°4 (V02-01/01/2019)	DEHP:0.3mg/kg BBP:3mg/kg DBP+DIBP:0.012mg/kg DINP+DIDP:0.9mg/kg	纸制品
铅		0.010 mg/kg	
1-羟基环己基（苯基）酮		未检出	
全面迁移量	Decree of 21 March 1973 and Ministry of health Decree of 21 November 2015, No.195 Decree No. 72 of May 9, 2019	8mg/dm ²	金属制品（烤箱金属架、烤盘、平底锅）
镍		0.1mg/kg	
铬			
锰			
砷	Fiche MCDA N°2 (V01-01/05/2016)	未检出	陶瓷砂锅
铝		1 mg/kg	
钴		0.02mg/kg	

·参考网站：

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