



Food Contact Material Recall Notifications -2022 report 3

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 special warning systems to exchange information about measures taken responding to serious risks detected in FCM.

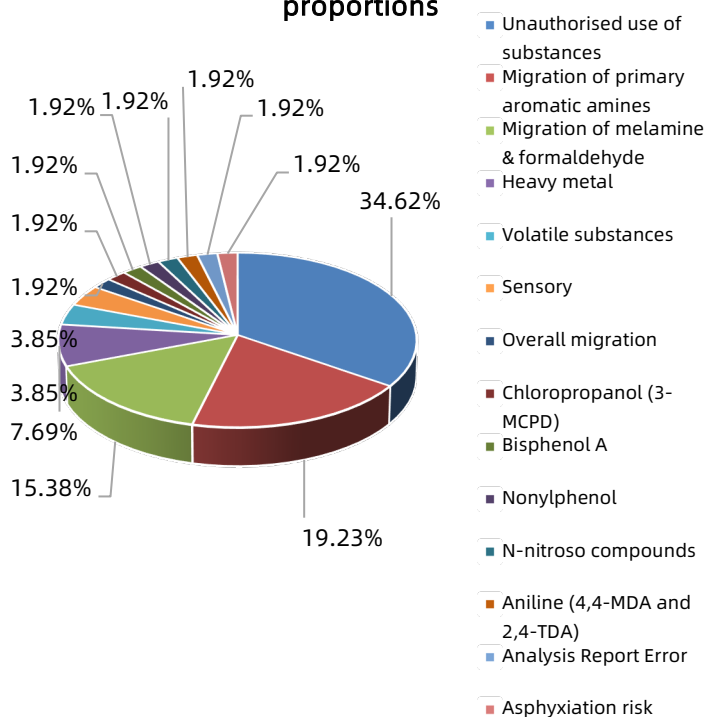
This report summarizes the notifications of food contact materials from Rapid Alert System for Food and Feed (RASFF) of the European Union in the third quarter of 2022. There were total 50 notifications in the third quarter of 2022 with **37 notifications for Chinese products**. The analysis is as follows:

1. Analysis of the reason for the notification

The reasons for the 50 notifications in the third quarter mainly included physical risk, chemical risks, the use of unauthorized substances and procedure documents. Among these notifications, the largest number of notifications were caused by the use of unauthorized substances, a total of 18 times, accounting for about 34.62%. The second is chemical risk, in which the excessive migration of primary aromatic amines was notified the most, 10 times, accounting for 19.23%.

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: Unauthorised use of substances (34.62%)

Analysis: In June 2020, the European Commission expert group issued a bamboo fiber research report, clarifying that (EU) No. 10/2011 does not permit the use of broken bamboo, bamboo powder, corn starch and other similar substances as additives in plastic materials and products. Therefore, a large number of bamboo fiber products have been recalled.

No. 2: Migration of primary aromatic amines (19.23%)

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 (both 15.38%)

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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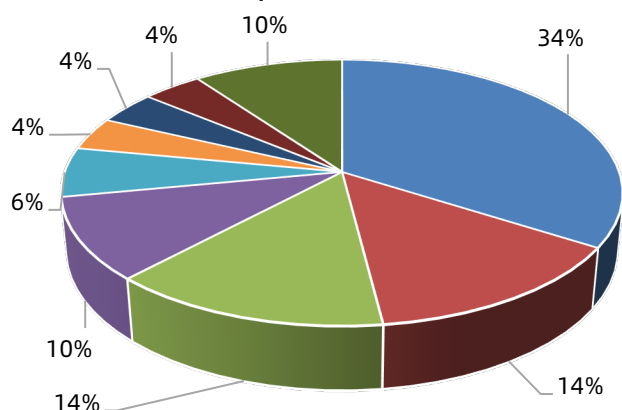
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2. Analysis of the Products for the notification

Figure 2 Distribution of notified products



- Products containing plant fiber
- Melamine tableware
- Paper Products
- Metalware
- Unknown
- Nylon products
- Other plastic products
- Glass / ceramicl products
- Silicone /latex Products

◆ Products for notification "ranking list"

■ No. 1: Products containing plant fiber (34.00%)

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.

■ No. 2: Nylon product (14.00%)

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. 3: Melamine tableware (14.00%)

Analysis: Melamine tableware belongs to high molecular polymer, abbreviated as MF, and its monomers are formaldehyde and melamine. If this kind of tableware is made of inferior melamine resin raw materials, it will increase the risk of melamine migration to food.

3. Analysis of the Countries for the notification

In the third quarter of 2022, there were 50 notifications of contact materials, of which 37 cases were notified for Chinese products, accounting for 74.00%. In terms of countries issuing notifications, there were 15 countries in the third quarter. Among them, Spain initiated 7 notifications, accounting for 14.00% of the total, followed by Poland, which initiated 6 notifications, accounting for 12.00% of the total.

See Figure 3 & Figure 4 for details.



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Figure 3 Notification of Chinese products

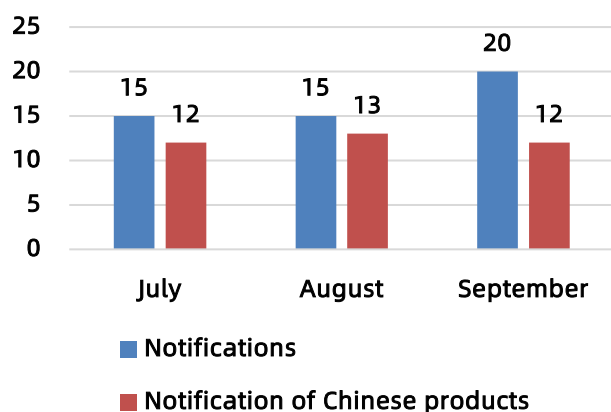
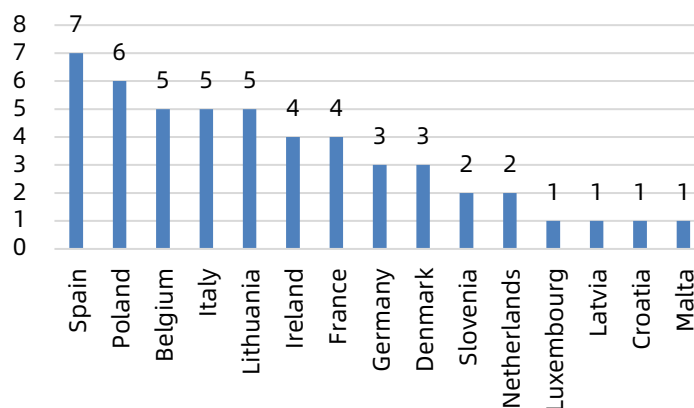


Figure 4 Number of notifications by countries




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,(EU)No 284/2011	15mg/kg	Bamboo fibreproduct, Plastic product (melamine & other)
migration of melamine	(EU)No 10/2011 and its amendments	2.5mg/kg	Bamboo fibre product, Plastic product (melamine)
Overall migration	(EU)No 10/2011 and relevant requirements of member states	60mg/kg or 10mg/dm ²	Plastic product
Bisphenol A	(EU)No 10/2011 and relevant requirements of member states	N.D	Children's cup
Volatile organic compounds	BfR Recommendation XV	0.5%	Silicone Products
Nitrosamines and nitrosamine based substances	93/11/EEC	Nitrosamine: 0.01mg/kg; N-nitroso compounds: 0.1mg/kg	Latex pacifier
Chloropropanol	BfR XXXVI	3-MCPD : 12 µg/L	Paper straw
Lead migration	EDQM Technical Guide Resolution CM/Res(2020)9	N.D	Paper Products
lead	84/500/EEC&2005/31/EC	0.8mg/dm ²	Ceramic plate
cadmium	84/500/EEC&2005/31/EC	0.3mg/L	Glass cup
lead		4mg/L	
iron	EDQM Technical Guide Resolution CM/Res(2013)9	Third: 40mg/kg	Bread metal formwork
tin		Third: 100mg/kg	
chromium		Third: 0.25mg/kg	Stainless steel cutter

Referenced Websites:

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



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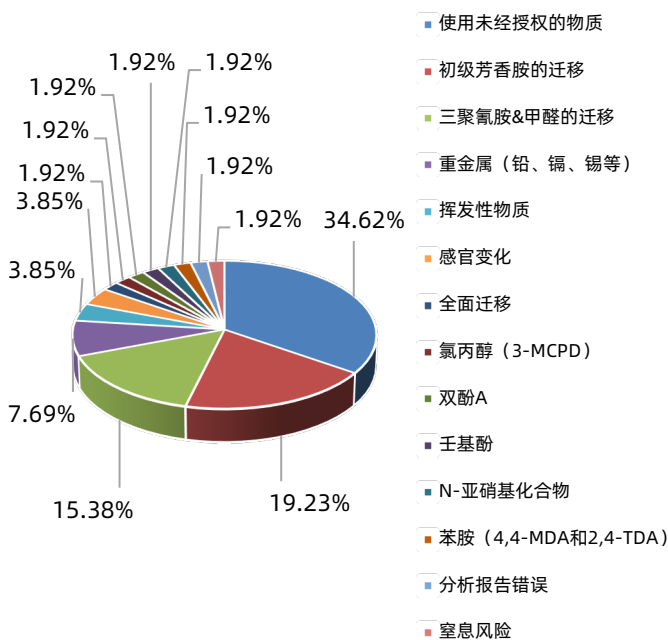
食品安全离不开食品接触材料的安全。随着科技的发展，食品接触材料的种类日益增多，由此引发的安全问题也不断出现。欧盟对各类食品接触材料都有严格的法规进行管控，并建立了一定的预警通报机制，对于不符合法规要求的产品采取相应的处罚措施。

本期汇总了2022年第3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50例，其中37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物理风险、有害化学风险、使用未经授权物质和程序文件四类。其中，由未经授权物质的使用引起的通报最多，共18次，约占34.62%；其次是化学风险，其中初级芳香胺迁移量超标的通报最多，共10次，占19.23%。详见图1。

图1 通报原因数量（次）及占比分布图



◆通报原因“排行榜”

■ No. 1: 使用未经授权的物质（占比34.62%）

风险分析：2020年6月，欧委会专家组发布竹纤维研究报告，明确了（EU）No. 10/2011未许可碎竹、竹粉、玉米淀粉等类似物质作为添加剂在塑料材质及制品中使用。因此大量植物纤维的制品被召回。

■ No. 2: 初级芳香胺迁移（占比19.23%）

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: 三聚氰胺&甲醛迁移（占比均为15.38%）

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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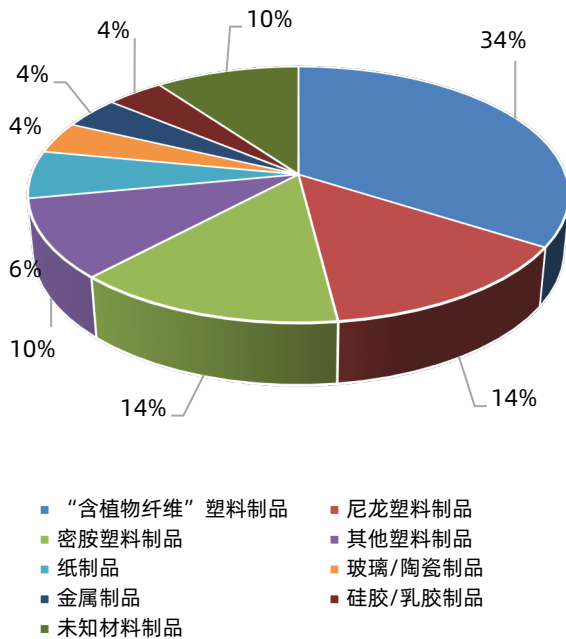
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2. 通报产品分析

图2 通报产品分布图



◆通报制品“排行榜”

■ No. 1: “含植物纤维”塑料制品 (占比34%)

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,也容易导致甲醛迁移量和三聚氰胺迁移量超标。

■ No. 2: 尼龙塑料制品 (占比14%)

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. 3: 密胺塑料制品 (占比14%)

风险分析: 密胺塑料制品属于高分子聚合物,英文缩写为MF,其单体为甲醛和三聚氰胺。这类餐具如果使用劣质密胺树脂原料制作,则会增加三聚氰胺迁移至食品的风险。

3. 通报国家分析

本期通报案例共计50例,其中,来自中国的产品被通报案例共37例,占比为74.00%。发布通报的国家方面,本季度共有15个国家。其中,最多的是西班牙,共发起通报7例,占通报总数的14.00%,其次是波兰共发起通报6例,占通报总数的12.00%。

图3 对华产品通报情况

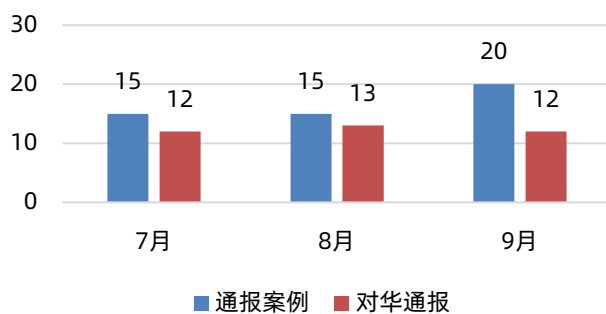
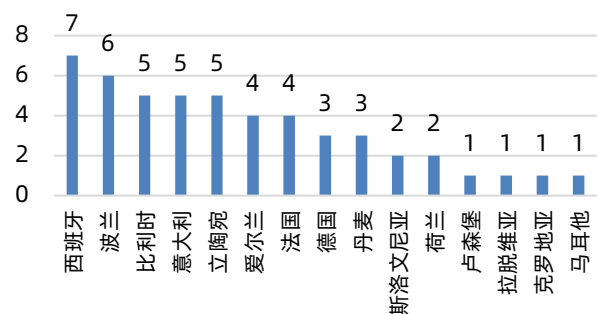


图4 各国通报数量



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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,(EU)No 284/2011	15mg/kg	含竹纤维制品、 塑料制品(密胺及其他)
三聚氰胺迁移量		2.5mg/kg	含竹纤维制品、 塑料制品(密胺)
全面迁移	(EU)No 10/2011及其修订案	60mg/kg or 10mg/dm ²	塑料制品
双酚A	(EU)No 10/2011及其修订案	未检出	儿童水杯
挥发性有机物	BfR Recommendation XV	0.5%	硅胶制品
亚硝酸胺及亚硝酸胺基类物质	93/11/EEC	N-亚硝酸胺: 0.01mg/kg; N-亚硝基化合物: 0.1mg/kg;	乳胶奶嘴
氯丙醇	BfR XXXVI	3-MCPD : 12 µg/L	纸吸管
铅迁移量	EDQM Technical Guide Resolution CM/Res(2020)9	未检出	纸制品
铅	84/500/EEC&2005/31/EC	0.8mg/dm ²	陶瓷盘
镉	84/500/EEC&2005/31/EC	0.3mg/L	玻璃杯
铅		4mg/L	
铁	EDQM Technical Guide Resolution CM/Res(2013)9	第三次: 40mg/kg	面包金属模板
锡		第三次: 100mg/kg	
铬		第三次: 0.25mg/kg	不锈钢刀具

·参考网站:

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

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