

# IMPROVING PRODUCT QUALITY AND SAFETY

## 改善產品質素及安全



Believing that prevention is better than cure, the Council puts substantial resources behind the testing, research and surveys of products in the market to ensure they are safe and at least of reasonable quality, so that consumers are able to make objective and informed purchase choices. Despite the unprecedented challenges posed by the coronavirus pandemic, this important work continued unabated during the year under review, with multiple studies completed on popular foodstuffs, electrical appliances and personal care items, among others. However, to address the urgent needs of the general public and protect consumers' health in the face of the pandemic, the Council put greatly increased priority on researching and testing major pandemic-related products such as face masks, disinfectants and wearable air purifiers.

本會相信「預防勝於治療」，故此投放較多資源測試、研究及調查市場上的產品，以確保產品安全和具基本合理質素，讓消費者在選購時可以作出客觀及知情的選擇。儘管 2019 冠狀病毒病疫情帶來了前所未有的挑戰，上述重要工作在年內有增無減，期間本會完成了多項研究，涵蓋廣受歡迎的食品、電器及個人護理產品。然而，疫情下為解決公眾的燃眉之急及保障消費者健康，本會將重點優先放在口罩、消毒噴劑及隨身空氣淨化機等與疫情相關產品的研究及測試。

### Research and Test Reports

A total of 56 testing, survey and research reports were published in the Council's monthly CHOICE Magazine during the year<sup>7</sup>. Products found to be non-compliant with Hong Kong regulations or international standards were referred to the relevant regulatory authorities by the Council for immediate follow-up, while the manufacturers and their agents were called on to rectify the faults and improve the products. Over the years, such market monitoring mechanisms have proven to be effective in facilitating law enforcement and driving different businesses to ensure value creation in their offerings.

### 研究及測試報告

年內，於本會《選擇》月刊上發表的產品測試、調查和研究報告共 56 份<sup>7</sup>，每當發現產品未能符合香港法規或適用的國際標準時，本會均會通知相關監管機構立即跟進，並呼籲製造商及代理商糾正錯誤並改善產品。多年來，這種市場監察機制均有效協助執法和推動業界為產品創造價值。

<sup>7</sup> See Appendix 6 for the lists of testing reports, market survey and in-depth study reports published during 2020-21. 於2020-21年度公布的產品測試、市場調查及研究報告一覽表見附錄六。

## Types of Product Tests

The Council conducts tests on more than a thousand products during the year by engaging universities or internationally recognised laboratories and through collaboration with Government departments. As an active member of the International Consumer Research & Testing (ICRT), which is an international consortium of more than 30 consumer organisations, the Council benefits from the experience of the other markets by accessing ICRT's product tests and valuable resources.

### Food

As consumers become increasingly health-conscious, the Council has stepped up resources in testing popular food products and advised consumers on their safety and nutrition levels.

#### Canned Fish

Canned fish are convenient and tasty backup foods found in most households in Hong Kong. The Council tested 46 canned fish samples covering 19 sardines, 20 tuna and 7 dace fish. The samples were tested for metallic contaminants, levels of food dyes, nutrition values, and polychlorinated biphenyls (PCBs), which are carcinogenic to humans.

The test revealed that canned fish is a good source of nutrients, in particular protein. Amongst the 3 types of fish, dace had the highest average calcium content but was also the highest in sodium. Also high in sodium (more than 600mg sodium per 100g) were 4 sardines-in-sauce samples and 1 tuna-in-oil sample, with reference to the benchmark from the Centre for Food Safety. The Council advised consumers not to consume canned fish together with the sauce to avoid excessive intake of sodium, which may cause health risks such as hypertension, stroke and cardiovascular diseases. Consumers should also diversify the types of fish they eat as each type had different areas of concern.

All samples were found to contain various types and levels of metallic contaminants, mainly arsenic, mercury, cadmium and lead. Cadmium, known to cause chronic poisoning with excessive intake, was detected in 90% of the sardine samples and 60% of the tuna samples. Over 70% of the sardine samples and more than 10% of the tuna samples were found to contain inorganic arsenic which is relatively toxic to human beings and prolonged intake would lead to neurological and cardiovascular diseases.

Nearly half of the sardine samples were found to contain PCBs, a kind of industrial contaminant that can accumulate in the fatty tissues of animals and ultimately in human bodies through the food chain. It is categorised as "Carcinogenic to Humans" by the International Agency for Research on Cancer. In addition, 90% of the tuna samples were found to have methylmercury, a contaminant that could hinder the development of fetuses' nervous systems and could lower the intelligence of young children. The Council was deeply concerned about the potential food safety risks in canned fish posed by environmental pollution and the raw materials used in fish farming.

## 產品測試的種類

年內，本會透過委託大學或國際認可的實驗室，或與政府部門協作，測試超過千種產品。國際消費者研究及試驗組織（ICRT）由世界各地超過30個消費者組織組成，本會作為ICRT的活躍成員，亦透過共享ICRT的產品測試和其寶貴資源，分享其他市場的經驗。

### 食品

隨着消費者的健康意識提高，本會增加資源測試廣受歡迎的食品，並提供有關安全和營養成分的建議。

#### 罐頭魚

罐頭魚方便又美味，是香港大多數家庭常備食品。本會檢測了46款罐頭魚樣本，包括19款沙甸魚、20款吞拿魚及7款鯪魚罐頭樣本，並對樣本內魚肉部分進行金屬污染物、食物中含有的染色料、致癌物多氯聯苯（PCBs），以及營養素含量的檢測。



是次檢測發現罐頭魚含有豐富營養，特別是蛋白質。罐頭鯪魚樣本的平均鈣質含量是3類罐頭魚中最高，但鈉含量也同樣最高。根據食物安全中心所列明的「高鈉」食物水平（每100克含超過600毫克鈉），4款醬汁浸沙甸魚及1款油浸吞拿魚樣本亦屬高鈉。本會建議消費者避免連醬汁一起食用罐頭魚，以免攝入過多鈉。過量攝入可能增加患高血壓、中風，和心血管疾病等健康風險。由於罐頭魚各有不同隱憂，消費者應保持均衡飲食，進食不同種類的罐頭魚。

全部樣本均含有不同種類和含量的金屬污染物，主要是砷、汞、鎘和鉛。9成沙甸魚及6成吞拿魚樣本檢出金屬污染物鎘，過量攝入可導致慢性中毒。逾7成沙甸魚及1成多吞拿魚樣本檢出無機砷，無機砷對人類毒性比較大，長期攝入可致神經和心血管疾病。

近半沙甸魚樣本檢出可致癌工業污染物多氯聯苯，能積聚在動物的脂肪組織，並最終沿食物鏈進入人體，國際癌症研究機構將其列為「令人類患癌」組別。此外，9成吞拿魚樣本檢出甲基汞。甲基汞有可能阻礙胎兒的神經系統發育，也可令幼童智力下降。本會高度關注罐頭魚中由環境污染和魚類養殖原料引致的潛在食品安全風險。

## Dried Pasta

Pasta is an exceedingly popular food for people of all ages, due to its versatility and relatively long shelf life. The Council tested 35 samples of pre-packaged dried pasta of different types, including fusilli, macaroni, and the traditional spaghetti. Samples were tested for furosine, light filth, mycotoxins, and pesticides.

The results revealed that 65% (23 samples) contained deoxynivalenol, a mycotoxin that could cause nausea, vomiting, diarrhoea, abdominal pain, and fever within 30 minutes after a large intake, resembling symptoms of food poisoning caused by pathogens and viruses. Although the reported level fell below the maximum level set by the European Union (EU), meaning normal consumption by adults will not cause adverse health effects, a child consuming other cereal products of relatively high deoxynivalenol level within the same day may result in a deoxynivalenol intake exceeding a child's maximum tolerable limit due to their lighter bodyweight.

Besides, all samples were found to contain foreign matters such as insect fragments, hair, stony fragments, metal fragments, natural fibres or plastic fragments. The sample with the highest level of foreign matter was found to contain more than 500 tiny insect fragments.

Another 65% (23 samples) were found to have traces of pesticide residue. Although the harmful substances detected were below the Hong Kong or EU reference standards, the fact that some samples were entirely free of such hazardous substances reflected that pesticides and mycotoxins could indeed be reduced during the production process. Manufacturers should strengthen hygiene control along the production chain, from the procurement of raw materials, processing, to transportation and storage, to ensure food safety.

## Infant Formula Milk Powder

Save for breastfeeding, infant formula is the only food source for babies of 6 months or below, and its quality and safety could have long-term impact on the health and well-being of infants. The Council tested 15 models of pre-packaged infant formula to examine the presence of heavy metal, phthalates, contaminants, microorganisms, energy, content of 34 nutrients, and a review of the product labelling.

Palm oil, which is commonly used in the formulation of infant formula milk powder, may produce 3-MCPD and glycidol during its high-temperature refining process. While glycidol, present as glycidyl esters (GE) in food, is considered a genotoxic carcinogen, the excessive daily consumption of the contaminant 3-MCPD over a prolonged period was confirmed to adversely affect kidney functions and the male reproductive system in experimental animals.



## 乾意粉

意粉的配搭多變，加上保質期較長，廣受不同年齡人士歡迎。本會檢測了35款預先包裝乾意粉，包括螺絲粉、通心粉及長條形意粉樣本。測試項目涵蓋糠氨酸、輕質異物、霉菌毒素，以及除害劑。

是次測試中，六成半（23款）樣本檢出霉菌毒素脫氧雪腐鐮刀菌烯醇，若大量攝入可能會於30分鐘內出現噁心、嘔吐、腹瀉、腹痛及發燒等徵狀，與病原體和病毒引致的食物中毒徵狀相若。雖然檢出的濃度均低於歐盟設定的上限，顯示一般食用不會對成人健康造成不良影響，但由於小童的體重較輕，如果小童在同一天還食用了其他脫氧雪腐鐮刀菌烯醇含量較高的穀物製品，便有機會超出小童每天的可容忍攝入量。

另外，測試亦發現全部樣本均檢出昆蟲碎片、毛髮、石屑、金屬碎片、天然纖維，或塑膠碎片等異物，最多異物的樣本共檢出超過500片微細的昆蟲碎片。

另有六成半樣本（23款）檢出微量除害劑。儘管是次檢出的各種有害物質均低於香港或歐盟的參考標準，然而因有樣本不含相關有害物質，反映在生產過程中減低這些有害物的含量並非不可能，生產商應該在採購原材料、加工、運輸及儲存的過程中，加強監管衛生，減低產品中除害劑及霉菌毒素的含量，以確保食品安全。

## 嬰兒配方奶粉

除母乳餵哺外，嬰兒配方奶粉是6個月或以下嬰兒的唯一食物來源，其品質和安全對嬰兒的健康和發展影響深遠。本會檢測15款預先包裝嬰兒配方奶粉，測試樣本是否含有重金屬、塑化劑、污染物、微生物，以及其能量和34種營養素含量，並檢視各樣本的營養標籤。

棕櫚油常用於嬰兒配方奶粉，其高溫精煉過程可能產生氯丙二醇（3-MCPD）和環氧丙醇。環氧丙醇具有基因毒性及致癌性，以縮水甘油酯（GE）的形態存在於食物。動物實驗結果顯示，長期每天攝入過量3-MCPD，會嚴重影響腎臟功能和雄性生殖系統。

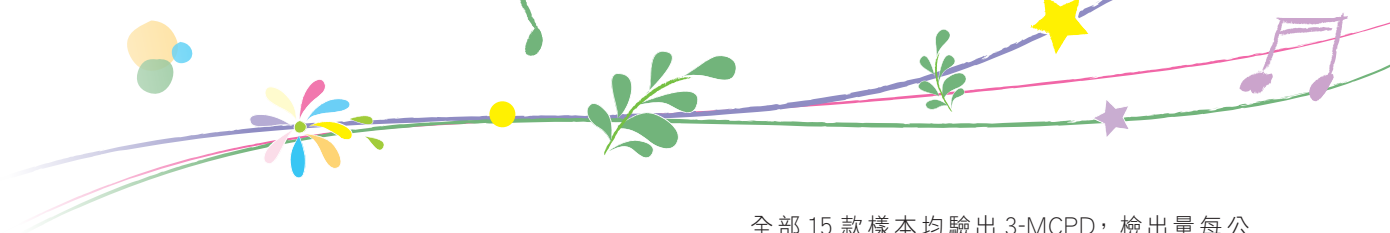
3-MCPDE

蛋白質



維他命C

DHA



All 15 models of infant formula were found to contain 3-MCPD ranging from 13µg/kg to 120µg/kg. Take a 1-month-old baby weighing 4.3kg as an example, the Provisional Maximum Tolerable Daily Intake (PMTDI) of 3-MCPD and 3-MCPDE (3-MCPD esters) set by the Joint Food and Agriculture Organization/World Health Organization of the United Nations (FAO/WHO) Expert Committee on Food Additives (JECFA) is 17.2µg (independent or total) while the standard set by the European Food Safety Authority (EFSA) is more stringent with a Tolerable Daily Intake (TDI) of only 8.6µg. The test sample with the highest level of 3-MCPD (120µg/kg) would exceed the TDI set by EFSA for a 1-month-old infant if they were fed according to the recommended amount on the label, which is equivalent to 106g infant formula powder daily.

Furthermore, 9 of the tested models were found to contain GE though all were below the EU's maximum limit (50µg/kg).

As there is no specific regulation in Hong Kong to regulate the content of 3-MCPDE and GE in infant formula milk powder, the Council opined that the Government should closely monitor international developments and consider introducing relevant food safety standards and regulations.

While the price difference among different brands of infant formula was onefold, the test results showed that the energy and the 33 required nutrient contents among different models were roughly the same. The Council stressed that while parents might find the advertised claims of infant formula product irresistible, there was in fact no significant difference in terms of nutrient contents. The overall scores of the different models were good and thus parents who wish to spend their money wisely do have choices that offer value for money.

### Edible Salts

Salt, with sodium chloride being the main ingredient, is an essential dietary nutrient as well as an indispensable condiment in daily cooking. On the other hand, excessive intake of sodium would have adverse effects on health and increase the risk of high blood pressure. Thus, consumers should manage their salt intake carefully in order to stay healthy.

The Council conducted safety and quality tests on 39 pre-packaged edible salts including sea salt, rock salt/rose pink salt, table salt/cooking salt, lake salt, iodised salt, roasted salt, and smoked salt. The safety tests examined the contaminant content of the samples, such as metallic contaminants and microplastics. The quality tests analysed the sodium chloride content, insoluble matter content, as well as the content of key minerals.

全部 15 款樣本均驗出 3-MCPD，檢出量每公斤介乎 13 至 120 微克。以一般 1 個月大、體重 4.3 公斤嬰兒為例，根據聯合國糧食及農業組織 / 世界衛生組織食品添加劑聯合專家委員會 (JECFA) 訂定的 3-MCPD 和氯丙二醇脂肪酸酯 (3-MCPDE) 的每日最高容許攝入量為 17.2 微克 (獨立或合計)，歐洲食物安全局的每日容許攝入量更嚴謹，僅 8.6 微克。以是次 3-MCPD 檢測值最高的 1 款樣本 (每公斤含量為 120 微克) 為例，若按奶粉罐上標籤建議的分量，即每日共餵哺約 106 克奶粉予 1 個月大嬰兒，從中攝入的 3-MCPD 已超過歐洲食物安全局的每日最高容許攝入量。

除此之外，有 9 款樣本檢出 GE，全部低於歐盟的上限 (每公斤 50 微克)。

鑑於香港現時沒有特定的法例規管嬰兒配方奶粉中 3-MCPDE 及 GE 的含量標準，本會認為政府應密切留意國際間的發展，考慮在本地引入相關食物安全標準和規管。

不同品牌嬰兒配方奶粉的價錢相差近 1 倍，但檢測結果顯示樣本間的能量及 33 種所需營養成分卻大同小異。本會強調，不同樣本的整體總分俱佳，縱然嬰兒配方奶粉廣告的聲稱往往令家長難以抗拒，但實際上營養成分並沒有顯著差異，所以希望精明消費的父母能知所選擇。

### 食鹽

食鹽以氯化鈉為主要成分，是必需的膳食營養素，亦是日常烹飪不可或缺的調味品。但另一方面，攝取過量鈉會影響健康，增加患上高血壓的風險。因此，消費者應小心控制鹽的攝入量，以保持身體健康。

本會測試 39 款預先包裝食鹽樣本的安全和品質，當中有海鹽、岩鹽 / 玫瑰鹽、餐桌鹽 / 烹調用鹽、湖鹽、加碘鹽、燒鹽，以及煙燻鹽。安全測試檢測金屬污染物及微塑膠等污染物；品質測試則分析氯化鈉、水不溶物，以及主要礦物質的含量。



Test results revealed more than 60% of the samples were found to contain metallic contaminants but most of their content complied with Hong Kong and international standards. The most expensive one was found to have a lead content (3mg/kg) slightly exceeding the maximum limit of the Food Adulteration (Metallic Contamination) (Amendment) Regulation ("Amendment Regulation") which was fully implemented in Hong Kong on 1 November 2020, and the same sample was also in excess of both the Mainland (2mg/kg) and international standards (1mg/kg). Another sample of rock salt had a total arsenic content of 0.55mg/kg, slightly higher than the maximum limit of the Amendment Regulation of Hong Kong and the Mainland standard as well as the maximum limit set by the Codex Alimentarius Commission (0.5mg/kg).

Among the 39 samples, 4 sea salt samples were detected to contain microplastics. Polymethyl methacrylate was the most commonly found microplastic, followed by polypropylene. The microplastics might come from contaminated raw materials or plastic packaging. Although EFSA pointed out the health risks posed to humans from consumption of seafood products contaminated by microplastics were rather low, it has been found that microplastics could absorb harmful chemical substances and also release their own additives. The Council called for consumers to support a sustainable consumption lifestyle, to reduce waste at its source and to minimise the use of plastic products.

Some edible salt products market themselves as being rich in minerals. However, tests revealed that minerals, other than sodium chloride, were found in small amounts only.

## Anti-epidemic Products

### Disposable Face Masks

Face masks have become a daily necessity in the time of the COVID-19 pandemic and their protective efficacy is of primary concern to consumers. Following the test in 2017, the Council launched the second test in 2020 covering 30 models.

The test results revealed that the overall performance was fairly satisfactory except for certain items that underperformed. 29 models had an average Bacterial Filtration Efficiency (BFE) and Particle Filtration Efficiency (PFE) of over 95% while the remaining 1 model labelled as ASTM F2100 Level 2 had an average PFE of just 86.64%. 4 models had PFE of all its 5 tested samples tested as lower than claimed, of which 2 also had BFE lower than their respective claims.

3 were detected with a relatively higher level of bioburden according to the EN 14683 standard and 1 failed to meet the ASTM Level 1 requirement in the test for resistance to penetration by synthetic blood. In the mask harness tension test, 11 models had at least 1 sample torn apart at below 10N tension and were hence rated as unsatisfactory.

The Council stressed that as face masks are crucial daily necessities to combat the pandemic, manufacturers should strictly monitor the quality and ensure all important information on the labelling is comprehensive and accurate, so as to ensure the best protection for consumers.

測試結果顯示，超過 6 成樣本檢出金屬污染物，但其含量大多數符合本港及國際標準。價格最貴的樣本的鉛含量為每公斤 3 毫克，輕微超過香港於 2020 年 11 月 1 日全面實施的《食物攙雜（金屬雜質含量）（修訂）規例》（修訂規例）的上限，同時亦超出內地標準（每公斤 2 毫克），以及國際上限（每公斤 1 毫克）。而另 1 款岩鹽樣本檢出的總砷含量為每公斤 0.55 毫克，略超過香港修訂規例、內地標準及食品法典委員會的上限（每公斤 0.5 毫克）。

39 款樣本中，有 4 款海鹽檢出微塑膠，其中以聚甲基丙烯酸甲酯（PMMA）最為常見，其次是聚丙烯（PP）。微塑膠可能來自受污染的原料或塑膠包裝。雖然歐洲食物安全局指出食用受微塑膠污染的海產對人類造成的健康風險甚微，但有研究發現微塑膠可吸附有害化學物質及釋放內含的添加劑。本會呼籲消費者支持可持續消費的生活模式，從源頭減廢，盡量減少使用塑膠製品。

部分食鹽產品標榜含豐富礦物質，然而檢測發現，除氯化鈉外，其他礦物質只佔小量。

## 抗疫產品

### 口罩

2019 冠狀病毒病疫情持續，口罩已成為防疫必需品，其保護效能自然是消費者的首要關注。繼 2017 年的測試後，本會在 2020 年進行第二次測試，涵蓋了 30 款口罩。

測試結果顯示，除了某些項目表現較差之外，整體表現尚算滿意。29 款樣本的平均細菌過濾效率（BFE）及平均顆粒過濾效率（PFE）均達 95% 以上，餘下的 1 款的 PFE 只得 86.64%，未能達到其聲稱美國材料和

試驗協會（ASTM）F2100 標準的二級的要求。有 4 款型號的全部 5 個測試樣本量得的 PFE 皆低於其聲稱，當中 2 款量得的 BFE 同時低於聲稱。

測試亦發現 3 款型號細菌菌落總數高於歐盟標準 EN 14683 所訂的水平及 1 款在合成血穿透測試不符合 ASTM 一級的要求。在耳帶斷裂拉力測試中，11 款型號有最少 1 個樣本的耳帶，在低於 10N 的拉力下斷裂，表現評為不滿意。

本會強調，口罩是抗疫的關鍵日用品，廠商應嚴格監控品質，並確保產品標籤上的重要資訊全面及準確，讓消費者得到最佳保護。



## Disinfection Alcohol

Consumers' demand for disinfection alcohol has surged due to the coronavirus pandemic but their quality and presence of toxic methanol is a big public concern. The Council's test on 24 disinfection alcohol models found that 6 contained a trace amount of methanol which may pose potential health risks such as chronic poisoning from long term exposure. Among the 22 models labelled with 75% alcohol, 16 had actual ethanol or isopropyl alcohol concentrations lower than its claims, of which 3 had actual alcohol concentrations of less than 70%. In addition, 16 had actual net volumes lower than labelled, with a maximum difference of over 20%.



## 消毒酒精

受疫情影響，市民對消毒酒精需求急升，然而消毒酒精的質素及是否含有毒甲醇卻備受公眾關注。本會測試 24 款消毒酒精，發現當中 6 款含微量甲醇，長期攝入有機會構成慢性中毒等潛在健康風險。在 22 款標示 75% 酒精樣本中，16 款實際乙醇或異丙醇含量低於聲稱，其中 3 款實際酒精含量不足 70%。此外，有 16 款的實際淨容量低於標示，最高相差超過 2 成。

The test results revealed that the quality of disinfection alcohol products on the market varied significantly and were far from satisfactory in safeguarding consumers especially under the pandemic. The Council urged manufacturers to be socially responsible by exercising stringent control in its production process and labelling to provide safe and effective disinfection alcohol to support consumers in fighting the pandemic.

是次測試結果反映市面上消毒酒精產品的質素參差，特別在疫情期間，保護消費者的表現強差人意。本會敦促生產商負起社會責任，嚴格控制生產流程及產品標示，提供安全有效的消毒酒精，支援消費者抗疫。

## Disinfectant Lanyards

Apart from traditional anti-epidemic supplies such as surgical masks and alcohol-based hand rubs, an array of novel products has cropped up since the outbreak of COVID-19 claiming to be effective in killing bacteria and viruses, yet their real-life efficacy has stirred much speculation.

The Council surveyed 14 models of disinfectant lanyard products, including 11 disinfectant cards, badges and bags, and 3 pen or stick-type products. The claimed effectiveness ranged from 2 weeks to 2 months after opening or being used.

Based on the information and test reports provided by the product suppliers, all models were unable to prove they could eliminate a particular virus or reduce the infectivity of a particular virus under the actual use conditions. This was due to the fact that the test environment adopted by the manufacturers were generally very different from the real-life situations where the products would be used.

For instance, one manufacturer placed its sample inside the test chamber for 24 hours prior to the start of the test, while another brand commenced the test after the concentration of the gaseous chlorine dioxide had reached a certain level. Besides, a total of 5 and 6 disinfectant sticks/pens were placed in the test chamber at the same time in 2 efficacy tests, while users were normally suggested to use only 1 stick/pen in real-life situations.

The Council opined that all information on the labels should be evidence-based, and it would possibly be misleading to advertise the products' efficacy with the use of a test conducted in a controlled environment vastly different from reality. Considering the lack of evidence to support the coronavirus-prevention efficacy of such spatial air disinfectants, consumers were reminded not to rely on these lanyards as the sole form of protection against infection.

## 除菌掛卡掛章

除了口罩及酒精搓手液等傳統抗疫物資以外，自 2019 冠狀病毒疫情爆發以來，坊間湧現了多種聲稱可以殺菌、除病毒的新式抗疫物品。然而，這些新產品的實際防疫效能卻成疑。

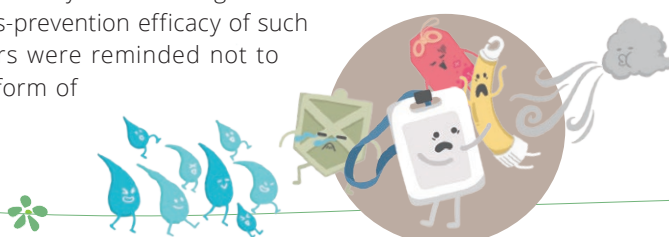
本會檢視了 14 款除菌掛卡掛章樣本，11 款為卡片、襟章或掛包款式，3 款為筆型或棒型產品。產品聲稱在開封後或自使用起計，有效期為 2 星期至 2 個月。

按產品供應商向本會提供的資料及產品試驗報告，當中所有產品都未能提供證據證明產品於實際使用的情況下，可以有效消除特定病毒，或者減低特定病毒的感染性，原因是廠商採用的試驗環境與實際使用產品的情況整體而言差別極大。

舉例說，有生產商先將其樣本放置在試驗空間內 24 小時後才開始試驗；另一品牌則待試驗空間內二氧化氯氣體水平達到若干濃度才展開。另有 2 種試驗同時用上 5 支及 6 支除菌棒/筆樣本，惟該產品宣傳資料均表示實際情況下使用者一般只需 1 支棒/筆。

本會認為，標籤上的聲稱必須基於實證。若試驗環境與實際使用情況大有出入，並以所得結果作產品效能宣傳，做法有構成誤導之嫌。考慮到目前未有證據支持這些除菌掛卡掛章的防疫效能，

本會呼籲市民切勿以此類產品作為唯一的防疫措施。



## Multi-purpose Disinfectants

Subsequent to the survey on disinfectant lanyards, the Council continued to test various newfangled anti-epidemic products that have become increasingly popular amongst consumers. One of them were multi-purpose disinfecting products which claimed to be able to disinfect the environment, objects and hands without pre-dilution, making them a convenient choice.

However, the test revealed that multi-purpose disinfectants' bactericidal and virucidal performance varied, with 80% of the models performing subpar to common 75% alcohol-based preparation and/or 1:99 diluted household bleach solution. As such, the Council reminded consumers that alcohol-based preparation and diluted bleach are more cost-effective options sufficient for disinfecting hands and general environments respectively.

15 models of multi-purpose disinfectants were tested, including 9 hypochlorous acid-based models (commonly known as "hypochlorous acid water"), 3 chlorine dioxide-based products, and 3 labelled with plant extracts as their active ingredients. Test items included the performance in killing 2 test bacteria (*Escherichia coli* K12 and *Staphylococcus aureus*) and inactivating the harder-to-kill test virus (*Adenovirus type 5*), determination of available chlorine, pH value, and stability of the product.

2 models were found to have a relatively more satisfactory virucidal efficacy, reducing the viral infectivity of *Adenovirus* by over 99.99% and 99.95% respectively. The remaining 13 models showed a reduction of viral infectivity from 0% to 96.20%.

The bactericidal test results revealed that 8 models were able to eliminate both test bacteria with a kill rate of over 99.999%, while the remaining 7 models showed drastic disparity in their performance, with the kill rate of *Staphylococcus aureus* ranging from 11.11% to 98.96%.

The available chlorine concentration and product stability might be key factors in determining the efficacy of a disinfectant. Among the 9 hypochlorous acid-based models, the available chlorine concentration measured immediately upon opening of samples ranged from undetected to 230mg/L, with the actual value of 3 models lower than claimed. The stability of 3 models were found to be mediocre.

Although test results showed that hypochlorous acid-based models generally have better virucidal and bactericidal efficacy, the actual product performance would be affected by a number of factors such as the product stability, pH value and storage conditions when used in real-life situations.



## 多用途殺菌消毒噴劑

繼除菌掛卡掛章的研究，本會持續就不同的新興抗疫用品進行測試，其中包括聲稱可以消毒環境、物品和雙手，毋須稀釋，方便易用的多用途殺菌消毒噴劑。

然而，本會的測試發現，各款多用途殺菌消毒噴劑樣本的殺菌及消除病毒活性表現參差。當中 8 成樣本表現遜於 75% 消毒酒精及 / 或以 1:99 比例稀釋的家用漂白水。故此，若分別用於消毒雙手和一般環境，消毒酒精和稀釋漂白水是較符合成本效益的選擇。

是次檢測了 15 款多用途殺菌消毒噴劑，包括 9 款標示以次氯酸為有效成分的樣本，俗稱「次氯酸水」；3 款產品以二氧化氯為有效成分；而餘下 3 款只說明有效成分為植物提取物。測試項目包括殺滅兩種細菌（大腸桿菌 K12 和金黃葡萄球菌）及消除一種較難對付病毒（人類腺病毒 5 型）活性的效能，並檢測有效氯濃度、酸鹼值，以及配方穩定性。

試驗中有 2 款樣本消除病毒活性的效能較理想，分別減少腺病毒感染力超過 99.99% 及 99.95%。餘下 13 款樣本消除腺病毒感染力的效能介乎 0% 至 96.20%。

殺菌測試結果顯示，有 8 款樣本可以同時殺滅 2 種試驗細菌，殺菌率超過 99.999%；但其餘 7 款樣本表現差異很大，以對付金黃葡萄球菌為例，殺滅率由 11.11% 至 98.96%。

有效氯濃度和配方穩定性或許是影響消毒劑產品效能的主要因素。9 款標示含次氯酸的樣本中，在打開樣本後立即檢出的有效氯濃度由沒有發現至 230mg/L；當中 3 款檢出的有效氯濃度低於聲稱濃度。試驗結果另發現 3 款樣本穩定性一般。

試驗結果亦顯示，儘管以次氯酸為有效成分的樣本普遍殺菌消毒效能較佳，但若於日常生活環境使用，效能會受其配方穩定性、酸鹼值及儲存狀況等因素影響。



## Portable UV Disinfection Devices

Ultraviolet-C (UVC) radiation is widely used for inactivating bacteria and viruses in freshwater, air and surface of objects. Many portable ultraviolet (UV) disinfection devices which claim to have applied this technology have emerged during the pandemic, claiming to be able to disinfect personal belongings and household environments. However, as improper use or excessive exposure to UVC may cause injuries to the eyes and skin, the safety of these products is consequential. With this in mind, the Council tested 8 models of UV disinfection boxes and handheld UV disinfection devices to assess their safety, bactericidal and virucidal performance.

Concerning the safety, 4 models, including 3 handheld and 1 box, were rated at high risk which meant that burns and injuries to the skin and eyes may result from a short period of exposure to UV emitted from these products. 2 models were rated at moderate risk which meant exposure to the UV from these products may cause painful eyes, tears, or thermal discomfort.

The actual hazard posed by excessive UV exposure is determined by its wavelength, intensity, distance, and time of exposure. However, it was found that none of the models marked their photobiological safety class on their packaging, labelling and instruction manual.

The test result reflected that although UVC could kill or inactivate bacteria and viruses, its efficacy in daily usage depends on numerous factors. The average kill rate of 2 test bacteria for 4 models ranged from 97.52% to 99.95%, while 4 other models had an average kill rate of 99.9% or above, among which 1 model could reach an average kill rate of over 99.99% if operated for 30 minutes.

On the other hand, there was a large variance in the virucidal performance. With influenza A H1N1 as the test virus, 1 handheld model performed the worst, with an average virucidal performance of only 14.97%. Only 2 handheld models reached over 99.99% in their virucidal performance.

Consumers should not over-rely on these disinfection devices and be extremely careful when using. Always maintaining personal and environmental hygiene by employing basic disinfecting methods may be more beneficial and economical.

## Wearable Air Purifiers

During the height of the pandemic, it was a common sight on the streets to find people wearing negative ion air purifiers which claimed to have antibacterial and air-purifying properties. According to the Council's test on 10 models, however, the overall performance was disappointing as they only showed limited efficacy in removing bacteria or air pollutants even when operating inside a tiny and sealed space.

In the bacteria removal test, each model was placed in a 1.5m<sup>3</sup> sealed test chamber sprayed with *Staphylococcus aureus* in the air. After operating for 15 minutes, their measured bacteria removal rates were between 64.9% and 74.9% but after 1 hour of operation, even the model with the best performance could only achieve around 80% bacterial removal.

## 便攜紫外線殺菌消毒器

短波紫外線 (UVC) 常用於抑制食水、空氣和物件表面上的細菌和病毒。疫情下，多種應用此科技的便攜紫外線殺菌消毒器應運而生，聲稱可為隨身物品，以至家居環境消毒。然而，不當使用或過量接觸 UVC 都可能會對眼睛和皮膚造成傷害，故消毒器的安全非常重要。因此，本會測試市面上 8 款紫外線消毒盒及手持式紫外線消毒裝置，評估其安全程度及殺菌消毒效能。

在安全方面，4 款樣本，包括 3 款手持式和 1 款盒裝樣本屬高危害級別，皮膚及眼睛於短時間暴露在該等產品的紫外線下，有機會引致灼傷和損害；2 款則屬中等危害級別，皮膚及眼睛若受產品的紫外線照射，可能會造成眼痛、流淚或皮膚灼熱等不適反應。

暴露於過高水平的紫外線下，具體危害程度取決於波長、強度、距離及暴露時間。然而，本會檢視各樣本的包裝、標籤資料及說明書後，發現全部樣本都未有標示相關的光生物安全危害級別。

測試結果反映，縱使 UVC 具有殺菌消毒的能力，在日常生活中，UVC 消毒實際效能取決於多個因素。4 款樣本對 2 種試驗細菌的平均殺滅率為 97.52% 至 99.95%；另有 4 款樣本對 2 種試驗細菌的平均殺滅率達 99.9% 或以上，當中 1 款在使用 30 分鐘後的平均殺菌率可超過 99.99%。

另一方面，樣本間抑制病毒活性的表現則十分參差。以甲型流感病毒 H1N1 作為試驗病毒，表現最差的 1 款手持式樣本，其抑制 H1N1 病毒效能平均只得 14.97%。只有 2 款手持式樣本效能超過 99.99%。

消費者不應過分依賴此類消毒器，而使用時亦應格外小心。經常保持個人及環境衛生及使用一般消毒方法會較有效及經濟。

## 隨身空氣淨化機

在疫情高峰時，聲稱可以抗菌及淨化空氣的可佩戴式隨身負離子空氣淨化機大行其道。然而，本會測試 10 款隨身負離子空氣淨化機，發現樣本整體表現令人失望，即使於細小密封的空間使用，無論是除菌或是去除空氣污染物的功效也有限。

除菌測試將樣本放置於體積為 1.5 立方米的密封測試艙內，空氣中噴灑了金黃葡萄球菌。樣本操作 15 分鐘後，量得除菌率介乎 64.9% 至 74.9%；即使操作長達 1 小時後，表現最佳的樣本的除菌率亦僅約 8 成。





The test also evaluated the removal rate of PM2.5 contaminants (fine suspended particulates of 2.5 micrometres or less in diameter, common air pollutants mainly from vehicle emissions which could penetrate human lungs and cause health problems). The PM2.5 removal rates of the models after operating for 30 minutes in a 3m<sup>3</sup> sealed test chamber ranged from 2.0% to 53.1%, with 6 models recording less than 5%. Even after extending the operation time to 2 hours, the removal rates of the 6 models were still less than 15%. The 2 models with the highest scores took 2 hours to reach a PM2.5 removal rate of above 90% in the test chamber.

The Council reminded consumers that no model could remove bacteria and PM2.5 contaminants completely even when placed in a tiny and sealed test environment, let alone in real-life situations with more variables, such as outdoors or environments with substantial quantities of bacteria in the air and a continuous pollutant source. Consumers should bear in mind that wearable negative ion air purifiers would not provide sufficient protection against bacterial infection for users and cannot substitute anti-epidemic measures such as face masks.

## Cosmetics and Personal Care

### Cushion Foundations

Cushion foundations offer a light and natural finish with easy application that saves time, making them increasingly popular amongst beauty-savvy consumers. The Council tested 30 cushion foundation models and found their performance to vastly vary, with the overall scores ranging from the lowest of 1.5 points to the highest of 5 points. Moreover, 5 out of the 7 unsatisfactory models that scored 2.5 points or below were priced at \$300 or above, while 4 models receiving a 5-point rating were priced under \$300, once again reflecting that price and quality do not always go hand in hand.

The preservative ability of 4 models was found unsatisfactory, as they failed to meet the European requirement and might become a breeding ground for bacteria in a warm and humid environment after repeated use.

6 models were detected with heavy metal cadmium, 3 of which exceeded the guidance limit of Germany. Toxic lead was found in 14 models though falling below the respective guidance limit. Excessive cadmium intake will increase the risks of kidney diseases and fragile bones, whereas lead accumulated inside the body may adversely impact the nervous system, liver and kidney functions.

4 models did not list their ingredient details in the product label while 11 were shown to contain 1 to 6 types of ingredients that were classified as allergenic fragrance in Europe. 10 models did not provide cautionary remarks and 1 did not indicate its expiry date. Consumers, especially those prone to skin allergies or allergic to fragrance, were reminded to read the listings on the labels carefully before purchase.

The Council called on relevant Government departments to set up safety regulations with reference to those in the Mainland or other jurisdictions, including the mandatory listing of ingredients, expiry date, cautions for proper use, so as to provide consumers with comprehensive product information to make an informed choice.

測試亦評估各樣本的PM2.5污染物去除率(PM2.5即直徑2.5微米或以下的微細懸浮粒子，是空氣中常見的污染物，主要來自汽車廢氣，能深入人體肺部影響健康)。各樣本在3立方米密封測試艙內操作30分鐘後，量得PM2.5去除率由2.0%至53.1%，當中6款樣本的PM2.5去除率更不足5%；即使操作達2小時，該6款樣本的PM2.5去除率亦不足15%。評分較高的2款樣本亦需長達2小時才能在密封測試艙內達致90%以上的PM2.5去除率。

本會提醒消費者，即使在細小密封空間的測試環境中，所有樣本均未能徹底去除細菌及PM2.5污染物，更遑論在實際環境下存在更多變數，包括身處室外或空氣中細菌量較多及有持續污染源的環境等。消費者必須注意，隨身負離子空氣淨化機不足以保障用家免受細菌的侵襲，亦不能取代口罩等防疫裝備。



### 化妝品及個人護理

#### 氣墊粉底

氣墊粉底可化出貼薄自然妝容，容易塗抹又節省時間，於愛美消費群中愈趨流行。本會測試了30款氣墊粉底樣本，發現樣本間的表現差異極大，總分由最低的1.5分至最高的5分不等。此外，7款得2.5分或以下的較差樣本中，5款的售價為\$300或以上，而獲得5分的樣本中有4款的售價低於\$300，再次反映價格和質量並非必然相關。

測試發現4款樣本的防腐能力不理想，未能符合歐洲的要求，在溫暖潮濕環境重複使用後，可能會成為細菌滋生的溫床。

6款樣本檢出重金屬鎘，其中3款超出了德國的指引規限。有14款樣本亦檢出有毒的鉛，但低於相關的指引規限。過量攝入鎘會增加腎臟疾病和骨骼脆弱的風險，而人體內積累的鉛可能會對神經系統、肝臟和腎臟功能產生不良的影響。

4款樣本沒有在產品標籤中詳細列明成分資料，而11款樣本則顯示含有1至6種在歐洲被歸類為致敏香料的成分，10款樣本未有提供警示說明，1款未有標示使用期限。消費者，尤其是容易皮膚過敏或對香料過敏的人士，在購買產品前應仔細閱讀標籤上所列資料。

本會促請有關政府部門參考中國內地或其他司法管轄區，為化妝品訂定安全法規，包括強制列出詳細成分、有效期限、正確使用的警示，以便向消費者提供更全面的產品資訊，協助他們知所選擇。

## Sunscreens

UV rays in sunlight could lead to all kinds of skin problems and health risks, such as skin ageing, darkening, sunburn or even skin cancer. As such, the protective efficacy of sunscreens is of utmost importance. The Council tested 30 models of sunscreens for daily use and over 80% of them were unable to provide protection according to their labelled efficacy. This discrepancy may result in inadequate protection for consumers and increase health threats, especially during prolonged outdoor activities.



## 防曬產品

陽光中的紫外線可導致不同的皮膚問題和健康風險，例如皮膚老化、曬黑、曬傷，甚至皮膚癌。因此，防曬產品的保護效能至關重要。本會測試 30 款日常防曬產品，發現超過 8 成樣本未能達到其標示的防曬效能，此差異可能導致消費者，尤其是進行長時間戶外活動時，因防曬保護不足而增加健康風險。

14 of the tested models were of “high protection” and labelled from SPF30 to SPF50 while the other 16 were “very high protection” formulas labelled as SPF50+. The SPF test results revealed only 4 of the high protection sunscreen models fully complied with the efficacy labelling requirement under the EU Cosmetics Regulation. Among the 16 models labelled as very high protection (SPF50+), only 1 fully complied with the EU requirement, which requires sunscreen labelled with SPF50+ to have a measured SPF value of 60 or above. The measured SPF value in 14 of them were below SPF60, of which the lowest performing 2 were recorded with a measured value of just 11.7 and 14.3 respectively. The 1 remaining model did not meet the relevant criteria for UVAPF and critical wavelength although its measured SPF value exceeded 60.

14 款樣本標示為 SPF30 至 50，屬於高度保護的防曬產品，其餘 16 款均標示為 SPF50+，屬極高度保護的防曬產品。SPF 測試結果顯示，屬於高度保護的防曬產品中，只有 4 款完全符合歐盟《化妝品條例》中的效能標示要求。而 16 款標示為極高度保護防曬產品 (SPF50+) 中，僅 1 款完全符合歐盟要求。歐盟的法規要求標示為 SPF50+ 的防曬產品所量得的 SPF 值必須為 60 或以上。14 款樣本量得的 SPF 值為 60 以下，SPF 值最低的 2 款樣本更分別只量得 11.7 和 14.3。餘下 1 款雖然量度出的 SPF 值高於 60，卻未能符合 UVAPF 及臨界波長的相關要求。

As for product labelling, 6 models only listed their ingredients in Japanese and general consumers may not be able to identify possible allergens or apply the products correctly. Suggested usage amount was not found in 21 models while 3 models were not marked with any expiry date. The Council urged manufacturers to review their production technology and process, and to indicate accurate efficacy on their labels, provide clear product information and usage instructions.

產品標籤方面，6 款樣本只用日文提供成分資料，一般消費者或未能知悉產品是否含有可能致敏原或理解如何正確使用產品；21 款沒有標示建議使用分量，另有 3 款樣本沒有標示任何有效期限的資訊。本會敦促廠商切實檢視生產技術和流程，並準確標示其防曬效能，提供清晰的產品資料和使用方法。

## Condoms

Condoms, when used properly, are effective not only for contraception, but also for preventing HIV infection and other sexually transmitted diseases. The Council tested 30 models of condoms from 9 brands, including 22 made of latex, 6 of synthetic material polyurethane (PU), and 2 of polyisoprene (PI).

## 安全套

正確使用安全套，除了能避孕外，還可以預防感染愛滋病和性病。本會測試了 9 個牌子共 30 款安全套，當中 22 款的原料為橡膠、6 款為合成物料聚氨酯 (PU)、2 款為合成物料聚異戊二烯 (PI)。

In testing the condoms' physical properties, including leakage, bursting volume and pressure, package integrity of individual containers, their overall performance was satisfactory. However, it was observed that the thickness of the condoms differed as much as 4 times while the heavily promoted claims of “thinness” on product packaging or labels were found to be ambiguous.

各款樣本物理性能測試，包括滲漏、爆破容量及壓力、個別包裝完整性，整體表現屬滿意。然而，測試發現樣本間的厚度可相差達 4 倍，而作為宣傳重點的「薄度」，展示在包裝和標籤上的字眼意思含糊。

Models with claims of “Ultrathin” varied by more than onefold in their thickness. About one third of the models highlighted numbers such as “0.01”, “0.02”, “0.03” on the package or labels to attract consumers, yet some of them neither stated the unit of the numbers nor the meaning of these numbers clearly. In an extreme case, “001” was printed on the box of 2 models but their actual thickness was 0.054mm and 0.055mm respectively. Given that the numbers could easily misguide consumers to associate it with the thickness of the products, the Council urged suppliers to clearly state the unit used in presenting the product thickness on the packaging so that consumers can make proper comparisons.

聲稱「超薄」的樣本厚度相差逾倍。約三分之一的樣本包裝或標籤以例如「0.01」、「0.02」、「0.03」等數字作招徠，但部分沒有標明計量單位，也沒有清楚說明數字的意思。在最極端的例子中，2 個樣本在包裝盒上列出「001」這組數字，但量得的厚度分別為 0.054 及 0.055 毫米。這些數字有可能令消費者誤會與產品厚度相關，本會促請供應商在包裝上清楚列明標示產品厚度的計量單位，方便消費者比較。



In the rubber production process, chemicals may be added as an accelerator. The pollutant N-nitrosamine is formed when these chemicals react with nitrogen oxides in the air. Some N-nitrosamines have been classified by the International Agency for Research on Cancer (IARC) in Group 2A as agents “probably carcinogenic to humans” and in Group 2B as “possibly carcinogenic to humans”. Migration of N-nitrosamines was detected in 5 models. Although the levels detected were not high, and according to WHO’s technical report, the risk of tumours induced by using condoms is very low, the Council advised manufacturers to adopt the recommendations of WHO’s technical report to reduce the level of N-nitrosamines so as to protect consumers.

由於在橡膠產品的生產過程中，或會添加一些化學物質作為加速劑，這些化學物質與空氣中的氮氧化物發生反應後，可形成 N-亞硝胺。部分 N-亞硝胺被國際癌症研究機構歸類為第 2A 組「可能令人類患癌」物質和第 2B 組「或可能令人類患癌」物質。5 款樣本檢出可遷移 N-亞硝胺，儘管檢出量不高，而根據世衛技術報告，使用安全套誘發腫瘤風險甚低，本會仍期望生產商採納世衛技術報告中有關減低 N-亞硝胺的建議，保障消費者權益。

## Electrical Products

### Air Fryers

Air fryers, lauded for their ability to achieve deep-frying results without the addition of cooking oil, have become one of the most popular kitchen appliances in recent years. In fact, “healthy and easy cooking” has become a common marketing tactic for air fryers, which boast versatile recipes from French fries to chicken drumsticks and even homemade roasted pork.

## 電器產品

### 氣炸鍋

要數近年廚房電器新寵，標榜不用添加食油烹調也能達到油炸食物效果的氣炸鍋必然榜上有名。由氣炸薯條、雞腿，以至自家製燒肉，不少品牌均以簡易健康煮食作為推廣氣炸鍋的賣點。

The Council conducted a test to evaluate the safety and performance of 12 air fryers and found 6 models to fall short of the international safety standards in terms of temperature rise, insulation distance and provision for earthing. The performance test evaluated the samples on air frying performance, energy consumption, ease of use, build quality and temperature. The performance of air-frying frozen thin French fries showed the greatest disparity, with instances of undercooking or uneven heat distribution.

本會測試 12 款氣炸鍋的電器安全及效能表現，發現 6 款未能符合國際安全標準，包括溫升、絕緣距離及接地裝置。效能測試方面則包括評審樣本的氣炸表現、省電表現、使用方便程度、機身設計及溫度。樣本在氣炸急凍幼薯條時，效果最參差，出現未煮熟或熱力不均勻的情況。



To investigate health risks arising from cooking food at high temperature (above 120°C), the Council tested air-fried frozen thin French fries for acrylamide, which is classified as “probably carcinogenic to humans” (Group 2A) by the IARC with minimal intake recommended. It was found that the acrylamide content of 6 models exceeded the EU benchmark level and 1 model even exceeded it by 13 times. However, acrylamide content can be lowered by adjusting the cooking time and temperature. The Council reminded consumers to control the intake of foods that have been air-fried at high temperatures or long durations and not to lower their guard simply because air-frying is deemed to be a healthier cooking method.

為研究高溫（高於 120°C）烹調食物所帶來的健康風險，本會是次也檢測了氣炸急凍幼薯條的丙烯酰胺含量。國際癌症研究機構已將丙烯酰胺歸類為「可能令人類患癌」（第 2A 組），建議攝取愈少愈好。測試發現 6 款樣本氣炸急凍幼薯條的丙烯酰胺含量，高於歐盟基準水平，其中 1 款更超出該基準水平 13 倍；不過，調節烹調時間及溫度可以降低丙烯酰胺含量。本會提醒消費者進食以高溫或長時間氣炸的食物要適可而止，不應因氣炸被視為較健康的烹調方法而放下戒心。



## Household Products

### Plastic Turners

With the pandemic reshaping our dining habits, people have been cooking at home more often. Plastic turners are amongst the most often-used kitchenware and favoured over their metal counterparts as they will not damage non-stick coating on frying pans as easily.

The Council tested 17 models of Chinese-style plastic turners. 1 model failed to meet its claimed heat resistance temperature. When submerged in 200°C peanut oil, its head melted and became deformed within 1 minute. Test results also showed that more than half of the models had an overall residue migration exceeding the 10mg/dm<sup>2</sup> limit set by the EU when used for cooking acidic food, while 3 other models exceeded the same limit when used for cooking food containing alcohol.

Some primary aromatic amines (PAA) have potential risks of causing cancer and the EU standard limit is “not detected”. However, PAA migration was found in 5 models with the highest migration at 9.7mg/kg. As plastic turners are in direct contact with food during cooking, the migration of toxic substances from the turner to food may cause health issues after consumption. Consumers were advised to avoid placing the plastic turners in direct contact with hot oil, sour food or food with alcohol for prolonged periods of time.

The Council urged related Government departments to set safety requirements with reference to the safety regulations of other countries in relation to food contact materials so as to safeguard consumers' health.

## International Comparative Tests

During the year under review, the Council stepped up collaboration with ICRT and joined forces with consumer associations in other jurisdictions to conduct international comparative tests on the following types of products and to advise consumers on selection tips, especially for expensive or durable products:

- Audio-visual and optical products, including soundbars, true wireless earphones and interchangeable lens camera kits;
- Computer and telecommunications products, comprising ebook readers, internet security software, video editing apps, VPN services, security cameras, smart phones and tablet PCs;
- Automobiles, road vehicles and related products, including cars and dashboard cameras;
- Household, personal and travel products, such as kitchen machines and food processors, robot vacuum cleaners; and
- Toys and children products, including kids' helmets and baby strollers.

In addition to the increasing popularity of the test findings in Hong Kong, the Council's reports on products such as cameras, mobile phones, tablets, cosmetics and shower products were viewed by a considerable number of visitors on the Council's Shopsmart website, which aims to provide extensive shopping information for visitors from the Mainland.

## 家居產品

### 膠鑊鏟

疫症大流行改變了我們的用餐習慣，市民較往常多在家煮食。膠鑊鏟是最常用的廚房用具，較金屬鑊鏟更受歡迎，因它們不會輕易損壞煎鍋上的易潔塗層。

本會測試了 17 款中式膠鑊鏟，發現 1 款樣本未能達到其聲稱的耐熱溫度，當浸沒在 200°C 的花生油中，其鏟頭部分被熱融，並在 1 分鐘內變形。測試結果還顯示，超過一半的樣本在用於烹煮酸性食品時，其雜質釋出量超出了歐盟所訂的 10mg/dm<sup>2</sup> 限值，另有 3 款樣本用於烹煮含酒精食品時也超出了該限值。

部分初級芳香胺 (PAA) 有潛在致癌風險，歐洲標準的限值是「不可檢出」；惟在測試中發現 5 款樣本有 PAA 遷移，當中最高遷移量為 9.7mg/kg。由於膠鑊鏟在烹煮過程中直接接觸食物，從鑊鏟釋出的有毒物質有機會經食物被消費者攝入，而引起健康問題，消費者應避免長時間將膠鑊鏟直接接觸熱油、酸性或含酒精的食物。

本會促請有關政府部門參考其他國家有關食品接觸材料的安全法規，為本港制定安全要求，以保障消費者的健康。

## 國際測試合作

年內，本會進一步與 ICRT 合作，並聯同其他司法管轄區的消費者組織，對以下不同類型的產品進行國際性比較測試，並特別針對昂貴或耐用產品向消費者提供選擇貼士：

- 影音及光學產品：整合式揚聲器 (soundbars)、真無線耳機及可換鏡頭相機套裝；
- 電腦及通訊產品：電子書閱讀器、網絡安全軟件、影片編輯手機應用程式、虛擬私人網絡 (VPN) 服務、監控鏡頭、智能手機及平板電腦；
- 汽車、道路車輛以及相關產品：汽車及行車記錄儀；
- 家居、個人及旅行產品：廚師機和食物處理器、吸塵機械人；及
- 玩具及兒童產品：兒童頭盔及嬰孩手推車。

測試結果除了廣受香港消費者歡迎，部分測試報告，例如相機、手提電話、平板電腦、化妝品及淋浴產品等，在本會專為內地旅客提供全面消費購物資訊而設的「精明消費香港遊」網站中，亦常被瀏覽。

