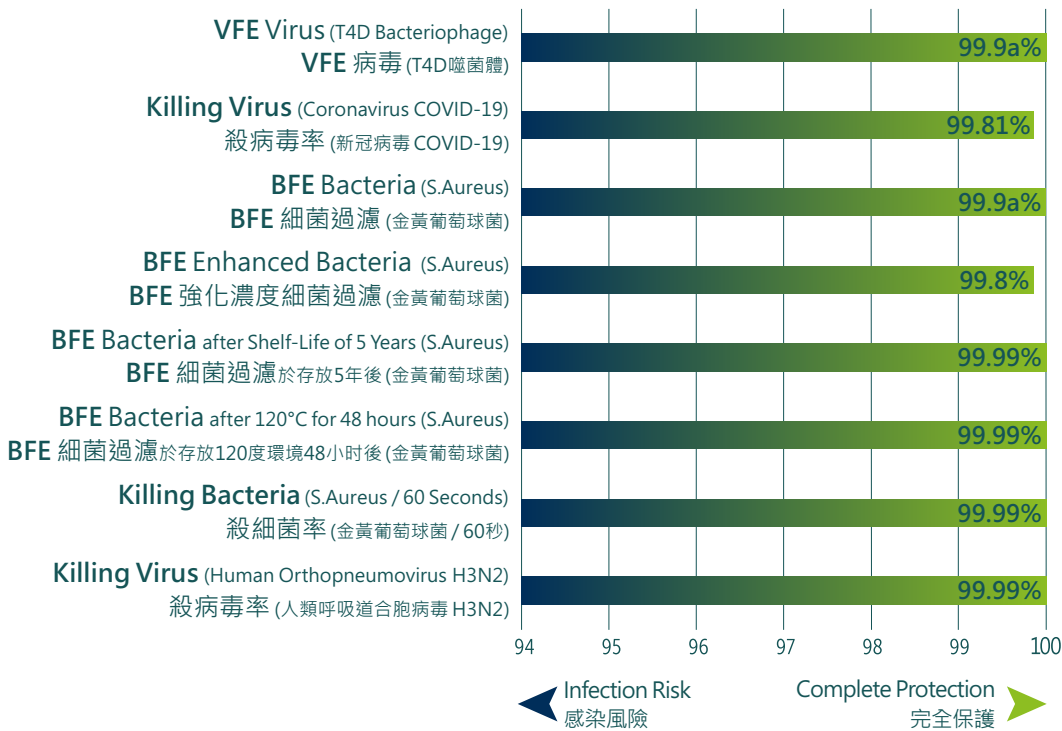




# 居安超高效滅殺新冠病毒細菌濾層

## Curie Ultrahigh Efficiency Viral Filter

### Efficiency 效率



### Properties 特性

Test 測試	
Differential Pressure (mmH <sub>2</sub> O) 壓力差 (mmH <sub>2</sub> O)	5
Flame Spread (Second) 防火度 (秒)	5
Microbio Cleanliness (cfu) 微生物潔淨度 (cfu)	17
Shelf Life (Year) 有效保存期限 (年)	5

Formula - Food Additives Approved by World Health Organization (WHO)  
配方成份 - 世界衛生組織核准食品添加劑

Curie technology pass chemical safety standards for baby textile products on 居安技術符合以下化學安全標準 · 適合嬰兒級紡織品安全使用

EN ISO 21084:2019  
EN ISO 18254:2016  
EN ISO 14184:2011  
JIS L 1041  
DIN EN ISO 17070:2015  
64 LFBG B 82.02-08  
EN ISO 14389: 2014  
US CPSC-CH-C1001-09.4

Production process is determined to be a non-hazardous process according to EU Dangerous Preparation Directive 1999/45/EC

根據歐盟危險制劑指令1999/45/EC規程及其修訂版 · 制備被確定為無危險過程





証實可以高效殺滅新冠病毒 COVID-19 (99.81%)  
Proven to kill COVID-19 (99.81%)



配合超高效病毒過濾效率 VFE (>99.9a%)  
Combined with Viral Filtration Efficiency VFE (>99.9a%)

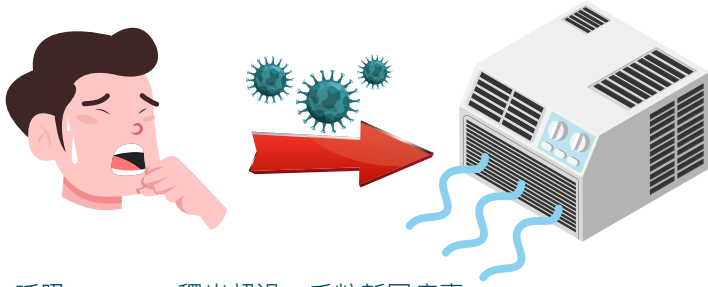


比傳統靜電濾材效能高500倍  
Over 500 times more effective than traditional electrostatic filter



不含任何毒性及金屬成份  
Non toxic and non metallic composition

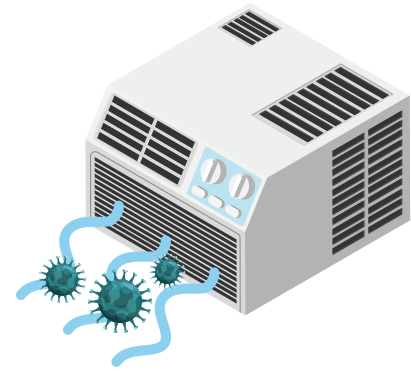
# 一次感染 Primary Infection



呼吸 : 釋出超過一千粒新冠病毒  
Breathing : > 1,000種COVID-19病毒  
咳嗽 : 釋出超過一百萬粒新冠病毒  
Coughing : > 1,000,000種COVID-19病毒  
感染 : 吸入超過一百粒活性新冠病毒  
Infection : 呼吸> 100種活躍的COVID-19病毒

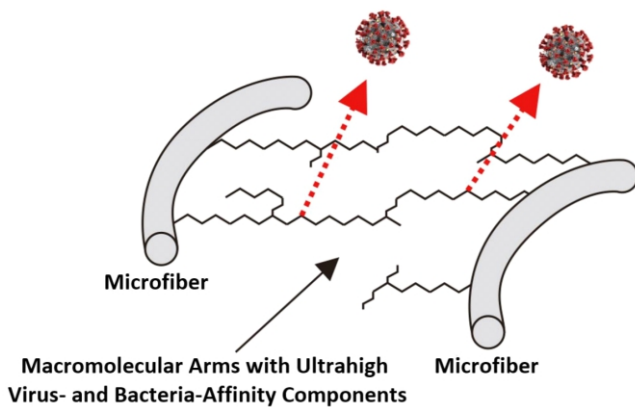
濾材防護水平 Type of Filter	穿透濾材病毒數量 No of Virus Penetrating Filter	
	呼吸 Breathing	咳嗽 Coughing
VFE 95%	>50	>50,000
VFE 99%	>10	>10,000
Curie 居安	>1	>10

# 二次感染 Secondary Infection



- 新冠病毒能於濾材上存活7天  
- Viruses can survive on the surface of traditional filter for 7 days
- 病毒和細菌數目能於使用濾材4小時後增長180倍  
- Viruses can grow 180 times more after 4 hours of usage
- 濾材上的新冠病毒進入冷氣系統造成二次感染  
- COVID-19 on the filter will enter into air conditioning system
- 能高效殺滅新冠病毒的濾材，有效減少二次感染風險  
- A COVID-19 killing filter can fully protect against secondary infection

## 如何攔截及殺滅新冠病毒COVID-19 How We Arrest and Kill COVID-19



居安纖維所產生的高強度梯度，與新冠狀病毒，病毒和細菌表面細菌的強韌性的刺突蛋白正負相吸，能有效阻隔帶連續的細菌和病毒，堪稱最高等級過濾效果。

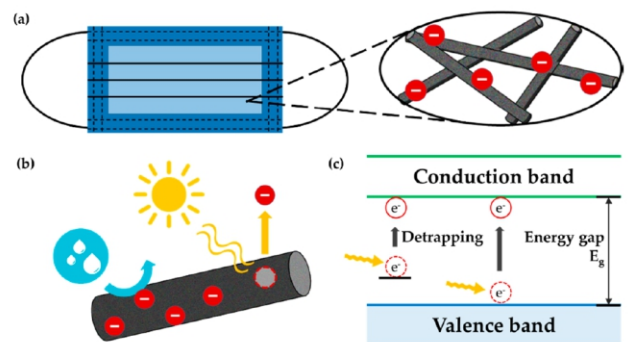
根據香港公開大學測試證明居安纖維穿透發出的極強長度，能阻隔在60秒內穿透撕裂細菌及病毒的外膜。

Spike protein over coronavirus is "strong negative charged" .

The highly positive-charged fibers inside Curie's filtration material attracts and arrests "strong negative charged" protein spikes on virus and bacteria

Strong attraction force can tear off protein chain over envelope of coronavirus, and achieve COVID-19 killing effect.

## 傳統靜電濾材缺點 Shortcoming of Traditional Electrostatic Filter



熔噴布依靠靜電捕獲細菌和病毒，而細菌和病毒表面蛋白質帶負極，而靜電本身偏負極，兩者極性相同，捕獲效率並非為最高效。

而靜電本身帶有不穩定性，容易因炎熱天氣及潮濕環境下散失放電，在使用濾材後數小時後，過濾效率開始衰減。

Meltblown cloth relies on electrostatic to capture bacteria and viruses. Surface proteins of bacteria and viruses are negative-charged, and the electrostatic itself is negative. The polarity of the two is the same and therefore it repels – inefficient in capturing microbials.

Electrostatic itself is unstable, and it is easy to dissipate and discharge due to high temperature and humidity. Few hours after the filter used, the filtration efficiency begins to decay.

特強防護 . 殺毒殺菌 . 涼感透氣 . 耐用長效

**Ultra-Protection, Anti-viral & Anti-bacterial, Light & Airy, Long-Lasting**

**特強防護 / Strong Protection:**

防護效能達最高醫療過濾級別 (VFE / BFE > 99.9a%)，符合 **ASTM F2101 Level 3** 及 **EN14683 Type IIR** 生物危害過濾要求，用得安心。

Highest medical-grade filtration efficiency (VFE / BFE > 99.9a%), meeting biohazard filtration requirement on **ASTM F2101 Level 3** and **EN14683 Type IIR** standard, for a peace-of-mind.

**殺毒殺菌 / Antiviral & Antibacterial**

高效殺滅**新冠病毒 (99.81%)**、**病毒 (>99.9a%)** 及**細菌 (>99.9a%)**，殺毒殺菌時間只需 **60 秒**，減少二次感染風險。

Kills **COVID-19 (99.81%)**, **virus (>99.99%)** and **bacteria (>99.99%)** in seconds, greatly reducing risk for secondary infection.

**涼感透氣 / Light & Airy**

超高透氣度，比同等級保護濾材**透氣度高 50%** 以上。

Ultra-high air permeability, 50% more air permeable vs comparable filter.

**耐用長效 / Long-Lasting**

攔截殺滅病毒細菌技術不依靠靜電，採用 Curie 專利強正極納米結構維持穩定效能，能於 **120°C 存放 48 小時後**，維持 **BFE > 99.99%**，保護效能不受高溫度高濕度影響。理想儲存情況下，**有效達 5 年之久**。

Humidity and temperature proof - Curie patented strong polycationic nano structure maintain ultra filtration and disinfection efficiency, it can remain **BFE > 99.99%** after conditioning in **120°C for 48 hours**. Effectiveness last for **5 year** under optimal storage conditions.

資質 Qualification



美國專利  
US Patent Number  
62988900



香港專利  
HK Patent Number  
32020008506.8



病毒過濾效率測試 Viral Filtration Efficiency (VFE) in ASTM F2101  
證實居安技術可超高效過濾病毒 (>99.9a%)  
Proven that Curie technology can effectively filter virus (>99.9a%)



強化劑量細菌過濾效率測試 Bacterial Filtration Efficiency with Increased Delivery Challenge (BFE) in ASTM F2101 and EN14683  
證實居安技術可超高效過濾強化劑量細菌 (99.8%)  
Proven that Curie technology can effectively filter increased challenge of bacteria (99.8%)



病毒過濾效率測試 Viral Filtration Efficiency (VFE) in ASTM F2101  
證實居安技術可超高效過濾病毒 (>99.9a%)  
Proven that Curie technology can effectively filter virus (>99.9a%)



紡織製品抗病毒活性的測定 Determination of Antiviral Activity of Textile Products  
BS ISO 18184  
證實居安技術可超高效殺滅新型冠狀病毒 COVID-19 (99.81%)  
Proven that Curie technology can effectively kill COVID-19 Coronavirus (>99.81%)



紡織產業綜合研究所  
Taiwan Textile Research Institute

空氣交換壓力差 Air Exchange Pressure in ASTM F2101 / EN14683  
證實 居安技術空氣交換壓力差 · 符合 ASTM F2101 Level 3 及 EN14683 Type IIR 要求  
Proven that air exchange pressure of Curie technology can comply standards of ASTM F2101 Level 3 and EN14683 Type IIR



細菌過濾效率測試 Bacterial Filtration Efficiency (BFE) in ASTM F2101  
證實居安技術可超高效過濾細菌 (>99%)  
Proven that Curie technology can effectively filter bacteria (>99%)



醫療器械無菌屏障加速老化標準 Standard Guide for Accelerated Ageing of Sterile Barrier Systems for Medical Devices in ASTM F1980-16  
細菌過濾效率測試 Bacterial Filtration Efficiency (BFE) in ASTM F2101  
證實居安技術在室溫 20 度存放 5 年後 · 可超高效過濾細菌 (>99%)  
Proven that Curie technology can effectively kill bacteria (>99%)



**紡織製品抗菌活性的測定 Determination of Antibacterial Activity of Textile Products**

**BS EN ISO 20743**

證實居安技術可超高效殺滅細菌 (>99%) · 殺菌時間少於 60 秒

Proven that Curie technology can effectively kill bacteria (>99%) · killing time is less than 60 seconds



**紡織製品抗病毒活性的測定 Determination of Antiviral Activity of Textile Products**

**BS ISO 18184**

證實居安技術可超高效殺滅 H3N2 流感病毒 (>99.99%)

Proven that Curie technology can effectively kill virus (>99.99%)

**紡織品烷基酚(AP)的測定 Determination of alkylphenols (AP) of Textile Products**

**EN ISO 21084:2019**

證實居安技術不含烷基酚(AP)

Proven that Alkylphenols (AP) is not detected from Curie technology

**紡織品乙氧基化烷基酚的檢測 Detection and Determination of Alkylphenol Ethoxylates (APEO) of Textile Products EN ISO 18254:2016**

證實居安技術不含乙氧基化烷基酚

Proven that Alkylphenol Ethoxylates (APEO) is not detected from Curie technology



**紡織品甲醛的測定 Determination of Formaldehyde - Free and Hydrolysed Formaldehyde of Textile Products EN ISO 14184:2011 / JIS L 1041**

證實居安技術不含甲醛 · 乎合 Type 1 - 嬰兒 < 36 個月安全標準

Proven that Formaldehyde is not detected from Curie technology, and it reach safety level for Type 1 – Baby < 36 Months

**紡織品五氯苯酚含量測定 Determination of Tetrachlorophenol-, Trichlorophenol-, Dichlorophenol-, Monochlorophenol-Isomers and Pentachlorophenol Content of Textile Products DIN EN ISO 17070:2015 / 64 LFBG B 82.02-08 (Modified)**

證實居安技術不含氯酚化合物及鄰苯基苯酚化合物

Proven that Chlorophenols Content and Ortho-Phenylphenol (OPP) are not detected from Curie technology

**紡織品鄰苯二甲酸酯含量的測定 Determination of the Phthalate Content of Textile Products EN ISO 14389: 2014 / US CPSC-CH-C1001-09.4**

證實居安技術不含鄰苯二甲酸酯

Proven that Phthalate Content are not detected from Curie technology

### 公司簡介 Company Introduction

居安為香港科技初創公司，專注創新技術開發、應用及產品化。公司以諾貝爾獎得主 Marie Curie (居里夫人) 命名，希望將居里夫人名言「我們不應害怕人生，反而要去瞭解。現在正是我們應該瞭解更多的時候，這樣我們就可以減少恐懼！」融入公司使命，在新冠肺炎疫情肆虐下，本著這樣的精神對病原有新的認識，從而採取新方法保護民眾免於感染。

Curie Limited is a tech start-up based in Hong Kong, with a focused-on material science innovation and technology development, application and productization. Curie was named after Marie Curie, inspired by the Nobel Laureate's famous quote;

*" Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less. "*

*- Marie Curie*

The new COVID-19 pandemic brought new meaning to these words of wisdom; Curie aimed to adapt and invent new methods of protection for the public against infection.

### 居安科研成果概要 Curie Filtration Technology

- 居安高效過濾技術利用獨有配方生物溶劑應用於不同材質，其產生之病毒過濾技術已獲專業認證機構證實成效卓越；  
Curie's Filtration Technology is applicable to different materials. This viral and bacterial filtration technology is proven by multiple lab tests by renowned certification organizations;
- 此發明擁有嶄新的病毒/細菌攔截及殺滅機制，該技術並已成功獲得美國及香港專利；  
Curie Filtration Technology kills virus and bacteria; obtained US and Hong Kong patents;
- 為香港科研、開發及生產成果；  
Research & development, design, and production in Hong Kong;
- 該技術可廣泛應用於空氣濾材及多種生活產品，透過產品為顧客提供高度保護；  
Wide-range of uses for combating COVID-19 pandemic: air filter and a other daily-use products, providing protection against viruses and bacteria;
- 公司率先將此高效病毒攔截 + 殺滅技術商業化，並以高性價比方式量產。  
Curie is the first to commercialize and mass-produce this high-efficiency, cost-effective virus killing technology
- 此高效過濾專利技術結合團隊在化學及應用材料方面的專業知識，令此科研成果成為目前世界上獨一無二的技術。  
This patented technology combines the team's expertise in chemistry and applied materials, cumulating in this "World 1st" technology.

居安高效過濾技術優勢 The Curie Advantage

居安高效過濾技術首階段運用在空氣濾材產品上，並經測試證實能達到高效過濾病毒細菌、特效防禦、長效保存、高透氣度等效果，充分解決傳統空氣濾材無法處理的問題。

The first application of Curie’s Filtration Technology is applied to air filter products, and has been tested and proven to kill viruses and bacteria; “Ultra-Protection, Anti-viral & Anti-bacterial, Light & Airy, Long-Lasting” .

	運用居安高效過濾技術的空氣濾材 Air Filter Using Curie's Ultrahigh-Efficiency Filtration Tech	傳統熔噴布空氣濾材 Traditional Air Filter Using Meltblown
<b>過濾效果 Filtration / Killing Mechanism</b>	<p>高效： 根據 ASTM F2101 及 EN14683 測試結果顯示： VFE 病毒過濾效率高達 &gt; 99.9a% BFE 細菌過濾效率高達 &gt; 99.99% 居安纖維所產生的高強度正極，與冠狀病毒、病毒及細菌表面帶強負極性的刺突蛋白正負相吸，能有效阻隔帶負極的細菌及病毒，堪稱最高級別過濾效果。</p> <p>High efficiency: According to ASTM F2101 and EN14683 test results show: VFE high as &gt; 99.9a% BFE up to &gt; 99.99% The highly positive-charged fibers inside Curie Filtration material attracts and arrests highly negative-charge protein spikes on virus and bacteria.</p>	<p>熔噴布依靠靜電捕獲細菌和病毒，而細菌和病毒表面蛋白質帶負極，而靜電本身偏負極，兩者極性相同，捕獲效率並非為最高效。 而靜電本身帶有不穩定性，容易因炎熱天氣及潮濕環境極下散失放電，在使用空氣濾材後數小時後，過濾效率開始衰減。</p> <p>Meltblown cloth relies on electrostatic to capture bacteria and viruses. Surface proteins of bacteria and viruses are negative-charged, and the static electricity itself is negative. The polarity of the two is the same and therefore it repels – inefficient in capturing microbials. Electrostatic itself is unstable, and it is easy to dissipate and discharge due to high temperature and humidity. Few hours after the air filter used, the filtration efficiency begins to decay.</p>
<b>防禦原理 Principles of Protection</b>	<p>特效： 根據香港公開大學測試證明居安纖維底層發出的極強正極，能阻隔在 60 秒內透過撕裂細菌及病毒的外膜。 殺新冠病毒率 - 99.81% 殺流感病毒率 &gt; 99.99% 殺細菌率 &gt; 99.99%</p> <p>Ultra-protection: According to the test performed by the Open University of Hong Kong, the extremely strong positive electrode emitted from the bottom layer of Curie fibre can block virus and bacteria by tearing the outer membrane within 60 seconds. Killing Rate of COVID-19 – 99.81% Killing Rate of H3N2 &gt; 99.99%</p>	<p>傳統空氣濾材只能發揮不同程度阻隔功能，將細菌或病毒阻擋在空氣濾材外，但無做到殲滅的功能，細菌或病毒會開始在熔噴布纖維上數倍地增生，因此長時間使用時，容易造成二次感染。</p> <p>Traditional air filter only acts as a barrier to block bacteria or viruses from the user, but they do not have the function of killing. This means bacteria or viruses will start to multiply on the meltblown fabric fibres, potentially causing secondary infection on long time usage.</p>



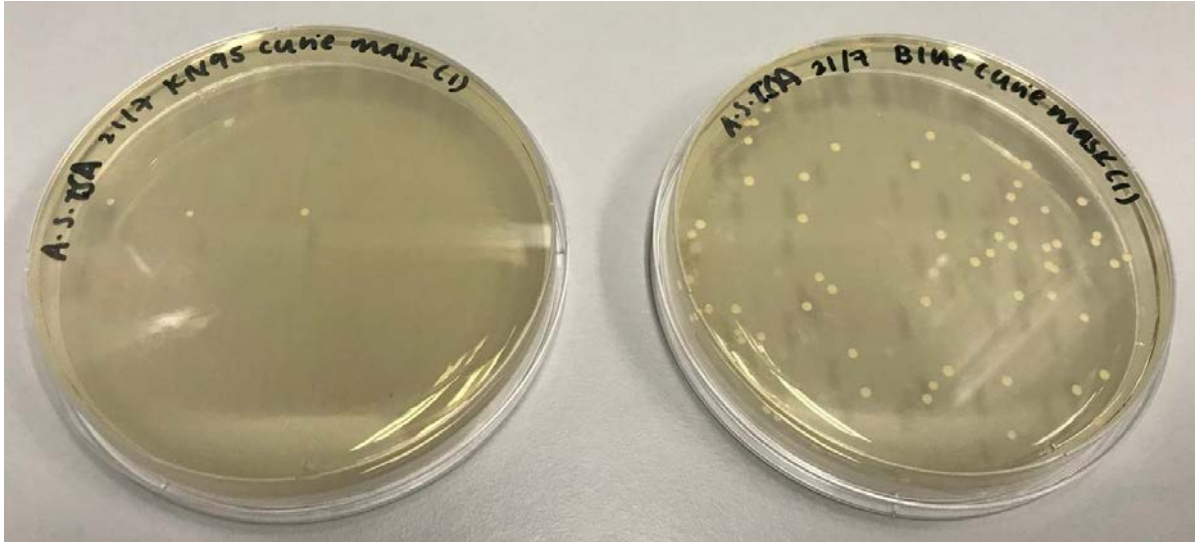
	Killing Rate of Bacteria > 99.99%	
<p><b>有效期</b> <b>Effective Period</b></p>	<p>長效 根據香港公開大學以符合 ASTM F1980 標準類比五年存儲條件所做的測試結果顯示，即便長期存儲，並可在存放於 120 度環境下 48 小時後，居安的過濾材料仍保持高效力，功能不減，解決了大企業、政府或公營機構需大量採購或可能面對產品失效的問題。</p> <p>Long-lasting: Curie Filtration Technology material was tested against storage in an environment of 120 degrees for 48 hours, in accordance with ASTM F1980 standard simulating five-year storage conditions. After the test, Curie's filter materials still maintain high efficiency and function. , It allows long term storage that large enterprises, governments or public institutions require.</p>	<p>有效期短，更可能因為運送過程中的外在因素（如酷熱天氣或儲存不當），導致熔噴布靜電大量流失，令產品出現未出售已失效的情況；亦或是現時何以民眾雖戴口罩，但疫情仍不受控的原因之一。</p> <p>The effective period is short, and it is most likely due to external factors in the transportation process (such as high temperature or improper storage), electrostatic loss of the meltblown is significant over-time, causing the product to be ineffective.</p>
<p><b>透氣度</b> <b>Air Permeability</b></p>	<p>高透氣度： 較傳統空氣濾材氣流阻力減少，透氣度高。</p> <p>High air permeability: Compared with traditional air filter, the air resistance is reduced and the air permeability is high.</p>	<p>難在抗菌及透氣度之間取得平衡。</p> <p>Most air filter sacrifice breathability in order to achieve the high filtration efficiency expected by users.</p>

居安超高效滅殺新冠病毒細菌濾層與傳統熔噴布空氣濾材的比較

Comparison between Curie Air Filter and Traditional Air Filter Using Meltblown

於靜電放電後細菌過濾效率的比較

Difference on Bacterial Filtration Efficiency (BFE) after Electrostatic Discharged

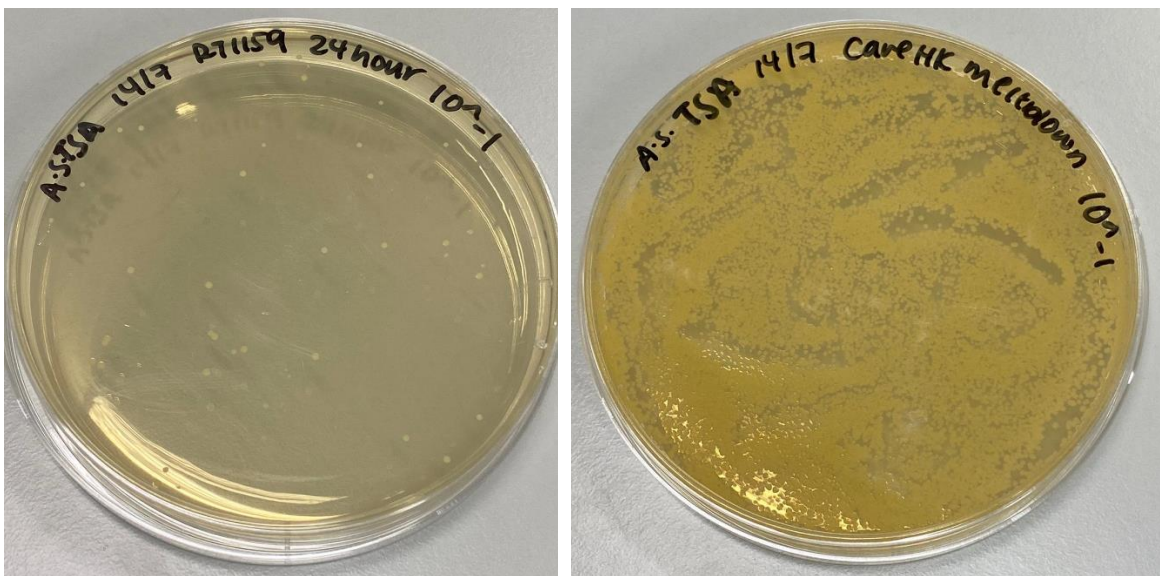


居安空氣濾材 (BFE > 99%)  
Curie Air Filter (BFE > 99%)

傳統熔噴布空氣濾材 (BFE < 90%)  
Traditional Air Filter Using Meltblown  
(BFE < 90%)

空氣濾材於使用 8 小時後細菌生長的比較

Difference on Bacterial Growth after 8 Hours Use of Air Filter



居安空氣濾材 (抗菌率 > 99%)  
Curie Air Filter (Antibacterial Activity > 99%)

傳統熔噴布空氣濾材 (充滿細菌)  
Traditional Air Filter Using Meltblown  
(Full of Bacteria)

## Viral Filtration Efficiency (VFE) Final Report

Test Article: modified non-woven  
colour: White  
Style #1001  
Study Number: 1280865-S01  
Study Received Date: 25 Mar 2020  
Testing Facility: Nelson Laboratories, LLC  
6280 S. Redwood Rd.  
Salt Lake City, UT 84123 U.S.A.  
Test Procedure(s): Standard Test Protocol (STP) Number: STP0007 Rev 16  
Deviation(s): None

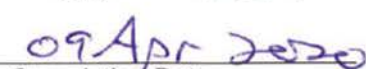
**Summary:** The VFE test is performed to determine the filtration efficiency of test articles by comparing the viral control counts upstream of the test article to the counts downstream. A suspension of bacteriophage  $\Phi$ X174 was aerosolized using a nebulizer and delivered to the test article at a constant flow rate and fixed air pressure. The challenge delivery was maintained at  $1.1 - 3.3 \times 10^3$  plaque forming units (PFU) with a mean particle size (MPS) of  $3.0 \mu\text{m} \pm 0.3 \mu\text{m}$ . The aerosol droplets were drawn through a six-stage, viable particle, Andersen sampler for collection. The VFE test procedure was adapted from ASTM F2101.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test Side: Either  
Test Area:  $\sim 40 \text{ cm}^2$   
VFE Flow Rate: 28.3 Liters per minute (L/min)  
Conditioning Parameters:  $85 \pm 5\%$  relative humidity (RH) and  $21 \pm 5^\circ\text{C}$  for a minimum of 4 hours  
Positive Control Average:  $1.6 \times 10^3$  PFU  
Negative Monitor Count:  $<1$  PFU  
MPS:  $2.9 \mu\text{m}$

Study Director

  
James W. Luskin

  
Study Completion Date



1280865-S01

**Results:**

Test Article Number	Percent VFE (%)
1	>99.9 <sup>a</sup>
2	>99.9 <sup>a</sup>
3	>99.9 <sup>a</sup>
4	>99.9 <sup>a</sup>
5	>99.9 <sup>a</sup>

<sup>a</sup> There were no detected plaques on any of the Andersen sampler plates for this test article.

The filtration efficiency percentages were calculated using the following equation:

$$\% VFE = \frac{C - T}{C} \times 100$$

C = Positive control average

T = Plate count total recovered downstream of the test article

Note: The plate count total is available upon request.



## Bacterial Filtration Efficiency (BFE) Final Report

Test Article: HKMSLMASK000  
Purchase Order: HKMSLPO20200326  
Study Number: 1282265-S01  
Study Received Date: 28 Mar 2020  
Testing Facility: Nelson Laboratories, LLC  
6280 S. Redwood Rd.  
Salt Lake City, UT 84123 U.S.A.  
Test Procedure(s): Standard Test Protocol (STP) Number: STP0004 Rev 18  
Deviation(s): None

**Summary:** The BFE test is performed to determine the filtration efficiency of test articles by comparing the bacterial control counts upstream of the test article to the bacterial counts downstream. A suspension of *Staphylococcus aureus* was aerosolized using a nebulizer and delivered to the test article at a constant flow rate and fixed air pressure. The challenge delivery was maintained at  $3.5 \times 10^3$  colony forming units (CFU) with a mean particle size (MPS) of  $3.0 \pm 0.3 \mu\text{m}$ . The aerosols were drawn through a six-stage, viable particle, Andersen sampler for collection. This test method complies with ASTM F2101-19 and EN 14683:2019, Annex B; with the exception of the **higher challenge level**, which may represent a **more severe test**.


All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test Side: Inside  
BFE Test Area:  $\sim 40 \text{ cm}^2$   
BFE Flow Rate: 28.3 Liters per minute (L/min)  
Conditioning Parameters:  $85 \pm 5\%$  relative humidity (RH) and  $21 \pm 5^\circ\text{C}$  for a minimum of 4 hours  
Test Article Dimensions:  $\sim 176 \text{ mm} \times \sim 160 \text{ mm}$   
Positive Control Average:  $3.5 \times 10^3$  CFU  
Negative Monitor Count:  $< 1$  CFU  
MPS:  $3.0 \mu\text{m}$

The positive control average was out of specification per STP0004 Rev 18 section 6.1 which states, "The BFE positive control average shall be maintained at  $1.7\text{-}3.0 \times 10^3$  CFU." Testing with a **more severe challenge** to the test articles represents a worse case. The sponsor accepted the use of the **higher challenge**; therefore, the results are considered valid at the testing conditions that occurred.



  
Study Director

  
James W. Luskin

20 Apr 2020  
Study Completion Date



1282265-S01

**Results:**

Test Article Number	Percent BFE (%)
1	99.8
2	99.8
3	99.8
4	99.8
5	99.8

The filtration efficiency percentages were calculated using the following equation:

$$\% BFE = \frac{C - T}{C} \times 100$$

C = Positive control average

T = Plate count total recovered downstream of the test article

Note: The plate count total is available upon request



Curie

## TEST REPORT

Applicant: CURIE LIMITED  
B3-1 G/F  
SUPERLUCK INDL CTR PHASE 2  
57 SHA TSUI RD  
TSUEN WAN NT HK

Date: Apr 22, 2020  
This is to supersede report no.  
HKGT05112613 dated Apr 21,  
2020

Attn: ALDRIN OR

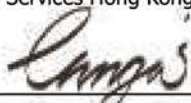
### Sample Description As Declared :

No. Of Sample : Several  
Buyer's Name : -  
Agent's Name : -  
Manufacturer's Name : Curie Limited  
Sample Description : Curie Ultrahigh-Efficiency Viral Filter超高效病毒濾材  
Colour : White  
Style No. : 1001  
Order No. / PO No. : -  
Product End Uses : -  
Fibre Content : Nonwoven  
Fabric/GMT Weight : 20g  
Ref. : -  
Date Received/Date Test Started : Apr 15, 2020  
Applicant's Provided Care Instruction/Label :  
-



# Curie

For and on behalf of  
Intertek Testing Services Hong Kong Limited

  
Teddy Y. N. Chung  
Director



TEST REPORT

Original Sample Photo:



---

For any queries on this report, you are welcome to contact our customer service representatives:

**US3**

Angie Yu (852) 98639123 or email to [angie.yu@intertek.com](mailto:angie.yu@intertek.com)

Curie

For and on behalf of  
Intertek Testing Services Hong Kong Limited

Teddy Y. N. Chung  
Director





## TEST REPORT

Tests Conducted (As Requested By The Applicant)

### 1 Evaluation of Viral Filtration Efficiency (VFE):

Summary: The VFE test is performed to determine the filtration efficiency of test articles by comparing the viral control counts upstream of the test article to the counts downstream. A suspension of bacteriophage  $\Phi$ X174 was aerosolized using a nebulizer and delivered to the test article at a constant flow rate and fixed air pressure. The challenge delivery was maintained at  $1.1 - 3.3 \times 10^3$  plaque forming units (PFU) with a mean particle size (MPS) of  $3.0 \pm 0.3 \mu\text{m}$ . The aerosols droplets were drawn through a six-stage, viable particle, Andersen sampler for collection. The VFE test procedure was adapted from ASTM F2101.

All test method acceptance criteria were met. Testing was performed in compliance with US FDA good manufacturing practice (GMP) regulations 21 CFR Parts 210, 211 and 820.

Test side: Either

Test Area:  $\sim 40 \text{ cm}^2$

VFE Flow Rate: 28.3 Liters per minute (L/min)

Conditioning Parameters:  $85 \pm 5\%$  relative humidity (RH) and  $21 \pm 5 \text{ }^\circ\text{C}$  for a minimum of 4 hours

Positive Control Average:  $1.6 \times 10^3$  PFU

Negative Monitor Count:  $<1$  PFU

MPS:  $2.9 \mu\text{m}$

---

Curie

## TEST REPORT

Tests Conducted (As Requested By The Applicant)

Evaluation of Viral Filtration Efficiency (Cont'd)

Result:

Test Article Number	Percent VFE (%)
1	>99.9 <sup>a</sup>
2	>99.9 <sup>a</sup>
3	>99.9 <sup>a</sup>
4	>99.9 <sup>a</sup>
5	>99.9 <sup>a</sup>

<sup>a</sup> There were no detected plaques on any of the Andersen sampler plates for this test article.

The filtration efficiency percentages were calculated using the following equation:

$$\%VFE = \frac{C - T}{C} \times 100$$

C= Positive control average

T= Plate count total recovered downstream of the test article

Note: The plate count total is available upon request

Remark: The test was conducted by competent subcontractor lab.

---

End of Report

*Except where explicitly agreed in writing, all work and services performed by Intertek is subject to our standard Terms and Conditions which can be obtained at our website: <http://www.intertek.com/terms/>. Intertek's responsibility and liability are limited to the terms and conditions of the agreement.*

*This report is made solely on the basis of your instructions and / or information and materials supplied by you and provide no warranty on the tested sample(s) be truly representative of the sample source. The report is not intended to be a recommendation for any particular course of action, you are responsible for acting as you see fit on the basis of the report results. Intertek is under no obligation to refer to or report upon any facts or circumstances which are outside the specific instructions received and accepts no responsibility to any parties whatsoever, following the issue of the report, for any matters arising outside the agreed scope of the works. This report does not discharge or release you from your legal obligations and duties to any other person. You are the only one authorized to permit copying or distribution of this report (and then only in its entirety). Any such third parties to whom this report may be circulated rely on the content of the report solely at their own risk.*

*This report shall not be reproduced, except in full.*



To : CURIE LIMITED  
Attention : ALDRIN OR

Date : Apr 22, 2020

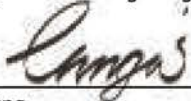
Re : Report Revision Notification

Report Number HKGT05112613 date APR 21, 2020

Please be informed that all the content recorded in the above captioned report will be void. This captioned report is now superseded by a revised Report, Number HKGT05112613-S1 , issued on Apr 22, 2020 .

Thank you for your attention

For and on behalf of  
Intertek Testing Services Hong Kong Limited



Teddy Y. N. Chung  
Director

Curie





Report No: ATCCR20081010F

# Test Report

Sample Category Curie Ultrahigh-Efficiency Viral Filter for KV-99


Client Curie Limited

Test Category Test Entrust

Date of Report 2020.08.18



### Detection Information

Client	Curie Limited		Sample Source	Inspect
Client address	Room C,23/F,Tsuen Tung Factory Building,38-40 Chai Wan KOK Street, Tsuen Wan,Hong Kong		Sample State	Normal
Date of Receives samples	2020.08.10		Date(s) of tests	2020.08.10-2020.08.18
Sample No	ATCCR20081010F-0810CP01			
Category	Test Project	Test Standard and Method		Test Instruments
Curie Ultrahigh-Efficiency Viral Filter for KV-99	Antiviral Activity Value (COVID-19)	ISO 18184:2019 Textiles Determination of antiviral		Biosafety Cabinet
End				
Remarks	Production units: Curie Limited    Trademarks: Curie Date of production: 2020.06.09 Sample model: Curie Ultrahigh-Efficiency Viral Filter for KV-99 Sample batch: 1001			
Report Preparer: 刘畅	Authorized Signatory: 刘畅		Date of Issues Report: 2020.08.18	
Report Reviewer: 李强	(Special Chapter for Inspection and Inspection) 			



**Test results**

Virus Types	(NO)	lg( $V_{a0h}$ ) (lgTCID <sub>50</sub> /mL)	lg( $V_{b2h}$ ) (lgTCID <sub>50</sub> /mL)	lg( $V_{c2h}$ ) (lgTCID <sub>50</sub> /mL)
COVID-19 virus MDCK cells	1	6.73	6.68	3.7
	2	6.68	6.56	4
	3	6.7	6.57	3.9
Average Value of lgTCID <sub>50</sub> /mL		6.70	6.61	3.88
Antiviral Activity Value		2.72		
Antiviral Activity Rate (%)		99.81		



End

# Beijing Shantong Medical Testing Laboratory

## Declaration of Test Results

Beijing Shantong Medical Testing Lab "BSMTL" hereby declares that the test item described below has been tested by BSMTL and complies with the requirements of

ISO 18184: 2019 Textile Determination of Antiviral

The complete detail of the tests performed and the results are recorded in

Report No: ATCCR20081010F Dated: 18.08.2020

Description of item tested: Curie Ultrahigh-Efficiency Viral Filter for KV-99

Virus Tested: SARS-COV-2 / COVID-19 MDCK Cells

Summary of test results -

Antiviral Activity Value: 2.72

Antiviral Activity Rate: 99.81%

Submitted by: Curie Limited  
Room C, 23/F, Tsuen Tung Factory  
Building, 38-40 Chai Wan Kok Street,  
Tsuen Wan, Hong Kong SAR

Declaration authorised by:

Name:

赵志国

Title:

实验室负责人

Date: 02/09/2020



Attention is drawn to the conditions upon which this declaration is issued, namely:

1. This declaration does not indicate provide or imply any measure of Approval, Certification, Supervision, Control or Surveillance by BSMTL to this or any related product.

2. This Declaration applied only to the particular sample tested and to the specific tests carried out as detailed in the Report referred to above.

3. The general and specific conditions of the BSMTL Conditions of Contract for Testing, apply in all respects.

Beijing Shantong Medical Testing Laboratory Co. Ltd., Fangshan, Beijing, China



统一社会信用代码  
91110111MA01A4KK4D

# 营业执照



扫描二维码登录  
“国家企业信用  
信息公示系统”  
了解更多登记、  
备案、许可、监  
管信息

(副本) (1-1)

名称 北京普通医学检验实验室有限公司

类型 有限责任公司(法人独资)

法定代表人 杨益

经营范围 医学检验医疗服务;技术开发;技术转让;技术咨询;技术服务。(企业依法自主选择经营项目,开展经营活动;医疗服务以及依法须经批准的项目,经相关部门批准后依批准的内容开展经营活动;不得从事本市产业政策禁止和限制类项目的经营活动。)



注册资本 600万元

成立日期 2018年01月24日

营业期限 2018年01月24日至2048年01月23日

住所 北京市房山区拱辰街道办事处学园北街11号综合服务楼一层5106

登记机关



2019年 05月 28日

国家企业信用信息公示系统网址: <http://www.gsxt.gov.cn>

市场主体应当于每年1月1日至6月30日通过  
国家企业信用信息公示系统报送公示年度报告。

国家市场监督管理总局监制





中华人民共和国

# 医疗机构执业许可证

机构名称 北京善通医学检验实验室

法定代表人 杨益

地址 北京市房山区拱辰街道办事处学院北街11号综合服务楼一层

主要负责人 赵志国

诊疗科目 医学检验科;临床免疫、血清学专业;  
临床细胞分子遗传学专业\*\*\*\*\*

登记号 007913110111417919

有效期限 自 2019年 07月 02日至 2022年 12月 30日

该医疗机构经核准登记，准予执业

中华人民共和国国家卫生健康委员会



发证机关 北京市房山区卫生健康委员会



发证日期 2019年 8月 14日

# 开户许可证

核准号: J1000210464502

编号: 1000-03577720

经审核, 北京普通医学检验实验室有限公司

符合开户条件, 准予

开立基本存款账户。

法定代表人(单位负责人) 杨益

开户银行

兴业银行股份有限公司北京房山支行

账 号 321580100100032556

发证机关(盖章)

2018年11月16日



# 北京市卫生健康委员会

---

北京市卫生健康委员会关于同意

密云区医院等 11 家检测机构

开展新型冠状病毒核酸检测的通知

西城区、朝阳区、丰台区、房山区、顺义区、大兴区、密云区卫生健康委，经济开发区，市疾控中心，市医学检验质控中心，各相关医疗机构：

根据北京市密云区医院、北京市西城区展览路医院、北京市丰台区铁营医院、北京市朝阳区三环肿瘤医院、北京朝阳急诊抢救中心、北京朝阳中西医结合急诊抢救中心、北京市大兴区中西医结合医院、北京北亚骨科医院、北京德威铭达医学检验所、北京善通医学检验实验室和北京索真医学检验实验室等 11 家检测机构（以下简称 11 家检测机构）提交的开展新冠病毒核酸检测的申请，结合专家评估意见，经研究，现就有关事项通知如下：

一、同意 11 家检测机构开展新型冠状病毒核酸检测工作。

二、11 家检测机构要严格按照国家和本市关于开展新型冠状病毒核酸检测、生物安全防护、生物样本资源管理的有

---

## 北京市病原微生物实验室及实验室活动备案通知书

京房山卫实验室备字[2020]第043号

北京善通医学检验实验室有限公司：

你单位于2020年06月27日提交的北京市病原微生物实验室及实验活动备案材料如下：

1.  《北京市病原微生物实验室及实验室活动备案表》；
2.  实验室或实验室设立单位的法人资格证明；
3.  实验室设立单位生物安全组织管理框架图；
4.  实验室布局平面图；

经本机关审查，认为申请材料齐全、符合《北京市病原微生物实验室及实验活动备案管理办法》的要求，决定予以备案。

卫生健康行政部门（印章）

2020年06月27日

备注：此备案旨在了解你单位实验室及其实验活动基本状况，不作为审批依据。请你单位备案后，严格按照《中华人民共和国传染病法》、《病原微生物实验室生物安全管理条例》和《人间传染的高致病性病原微生物实验室和实验活动生物安全审批管理办法》等相关法律法规规定，从事相关实验活动，规范实验室管理。

北京市卫生健康委员会制定

# 北京普通医学检验实验室

## 试剂制备间



# 样本制备间



# 扩增间



## 样本间和灭菌间





## 实验室走廊





TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H598 Quantity: 1PC Page Order/Pages: (P1/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Sub-Micron Particulate Filtration Efficiency(%) (0.1 μm PSL)	1	99.49	ASTM F2100-2019 9.3
	2	99.45	ASTM F2299-2017
	3	99.46	Flow rate:28.1
	4	99.48	(Liter/min)
	5	99.48	
	Ave.	99.47	
Air Exchange Pressure (mmH2O/cm <sup>3</sup> )	1	5.3	ASTM F2100-2019 9.2
	2	5.3	EN 14683:2019 Annex C
	3	4.9	
	4	5.1	
	5	5.3	
Flammability (as Received)		DNI	ASTM F2100-2019 9.5 CPSC 16 CFR 1610-2008

Note: 1mmH2O=9.8Pa.

Note: Air Exchange Pressure takes 5 pieces for testing.

Note: Flammability takes 20 samples for testing.

Note: "DNI":Did Not Ignite.

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug.07,2020 Date of Receipt: Jul.27,2020

Report No.: TAG9G706 Quantity: 1PC Page Order/Pages: (P2/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:160 mmHg	1	None Seen	ASTM F2100-2019 9.4
	2	None Seen	ASTM F1862-2017
	3	None Seen	
	4	None Seen	
	5	None Seen	
	6	None Seen	
	7	None Seen	
	8	None Seen	
	9	None Seen	
	10	None Seen	
	11	None Seen	
	12	None Seen	
	13	None Seen	
	14	None Seen	
	15	None Seen	
	16	None Seen	

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug.07,2020 Date of Receipt: Jul.27,2020

Report No.: TAG9G706 Quantity: 1PC Page Order/Pages: (P3/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:160 mmHg	17	None Seen	ASTM F2100-2019 9.4
	18	None Seen	ASTM F1862-2017
	19	None Seen	
	20	None Seen	
	21	None Seen	
	22	None Seen	
	23	None Seen	
	24	None Seen	
	25	None Seen	
	26	None Seen	
	27	None Seen	
	28	None Seen	
	29	None Seen	
	30	None Seen	
31	None Seen		
32	None Seen		

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H598 Quantity: 1PC Page Order/Pages: (P4/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Bacterial Filtration	1	99.9	ASTM F2100-2019 9.1
Efficiency (BFE)(%)	2	99.9	ASTM F2101-2019
Staphylococcus aureus	3	> 99.9	
ATCC 6538	4	99.9	
	5	99.9	

Note: Control average: 2640 CFU.

Note: Mean particle size: 2.8 μm.

Note: Testing side: outside of specimen.

Note: Testing area: 39.5 cm<sup>2</sup>.

Note: Flow rate : 28.3 L/min.

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.
- 2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.
- 3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H598 Quantity: 1PC Page Order/Pages: (P5/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan



- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.
- 2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.
- 3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*

Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 **試驗報告 TEST REPORT** 土城場區 TUCHENG

報告編號 Report No.: TFF9H598 數量 Quantity: 1件 報告頁次/頁數 (P1/5) Page Order/Pages: 來文字號 Ref. No.: 空 白

報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩

地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
微粒過濾效率 (0.1 μm PSL)	1	99.49
	2	99.45
	3	99.46
	4	99.48
	5	99.48
	平均	99.47
空氣交換壓力差 (mmH2O/cm <sup>2</sup> )	1	5.3
	2	5.3
	3	4.9
	4	5.1
	5	5.3
現狀防火性	DNI	ASTM F2100-2019 9.5 CPSC 16 CFR 1610-2008

註: 1mmH2O=9.8Pa。

註: 空氣交換壓力差, 取5個樣品測試。

註: 現狀防火性 取20個試片測試

註: "DNI"意謂不燃燒。

註: 依委託者所提供來樣資料為: Brandname: Curie

Model: Curie KV99 Face Mask

香港地址: 香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註: 試驗報告僅就委託者之委託事項提供試驗結果, 不對產品合法性做判斷。

附記: 1.本報告僅對樣品負責, 樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意, 不得摘錄複製, 但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of  
Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TAG9G706 數量 Quantity: 1件 報告頁次/頁數 (P2/5) Page Order/Pages: 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力:160 mmHg	1	無穿透
	2	無穿透
	3	無穿透
	4	無穿透
	5	無穿透
	6	無穿透
	7	無穿透
	8	無穿透
	9	無穿透
	10	無穿透
	11	無穿透
	12	無穿透
	13	無穿透
	14	無穿透
	15	無穿透
	16	無穿透

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 Face Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏 主任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839





日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27  
 報告編號 Report No.: TAG9G706 數量 Quantity: 1件 報告頁次/頁數 (P3/5) Page Order/Pages: 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗報告 TEST REPORT 土城場區 TUCHENG

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力:160 mmHg	17	無穿透
	18	無穿透
	19	無穿透
	20	無穿透
	21	無穿透
	22	無穿透
	23	無穿透
	24	無穿透
	25	無穿透
	26	無穿透
	27	無穿透
	28	無穿透
	29	無穿透
	30	無穿透
31	無穿透	
32	無穿透	

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 Face Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。  
 Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
 2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。  
 This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
 3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
 The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
 所長授權核發人：  
 Authorized by president of  
 Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
 Department of Testing and Certification, Taiwan Textile Research Institute  
 No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
 Tel : +886-2-22670321 ext. 7107, 7110  
 Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TFF9H598 數量 Quantity: 1件 報告頁次/頁數 Page Order/Pages: (P4/5) 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
細菌過濾效率(%)	1 99.9	ASTM F2100-2019 9.1
金黃色葡萄球菌	2 99.9	ASTM F2101-2019
ATCC 6538	3 > 99.9	
	4 99.9	
	5 99.9	

註：對照組的平均菌落數：2640 CFU。

註：平均粒徑：2.8 μm。

註：測試面：外側。

註：測試面積為39.5 cm<sup>2</sup>。

註：測試流量：28.3 L/min。

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 Face Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏  
主任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 試驗報告 TEST REPORT 土城場區 TUCHENG  
報告編號 Report No.: TFF9H598 數量 Quantity: 1件 報告頁次/頁數 (P5/5) Page Order/Pages: 來文字號 Ref. No.: 空 白  
報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
地址 Address: 407 台中市西屯區甘河路108號



附記: 1.本報告僅對樣品負責, 樣品保留期限為一個月。  
Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.本報告非經本檢測及驗證部書面同意, 不得摘錄複製, 但全部複製除外。  
This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
所長授權核發人:  
Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏  
主 任 高瑞宏

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H599 Quantity: 1PC Page Order/Pages: (P1/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Air Exchange Pressure (Pa/cm <sup>2</sup> )	1	50.7	EN 14683:2019 Annex C
	2	49.1	
	3	49.7	
	4	51.3	
	5	48.8	

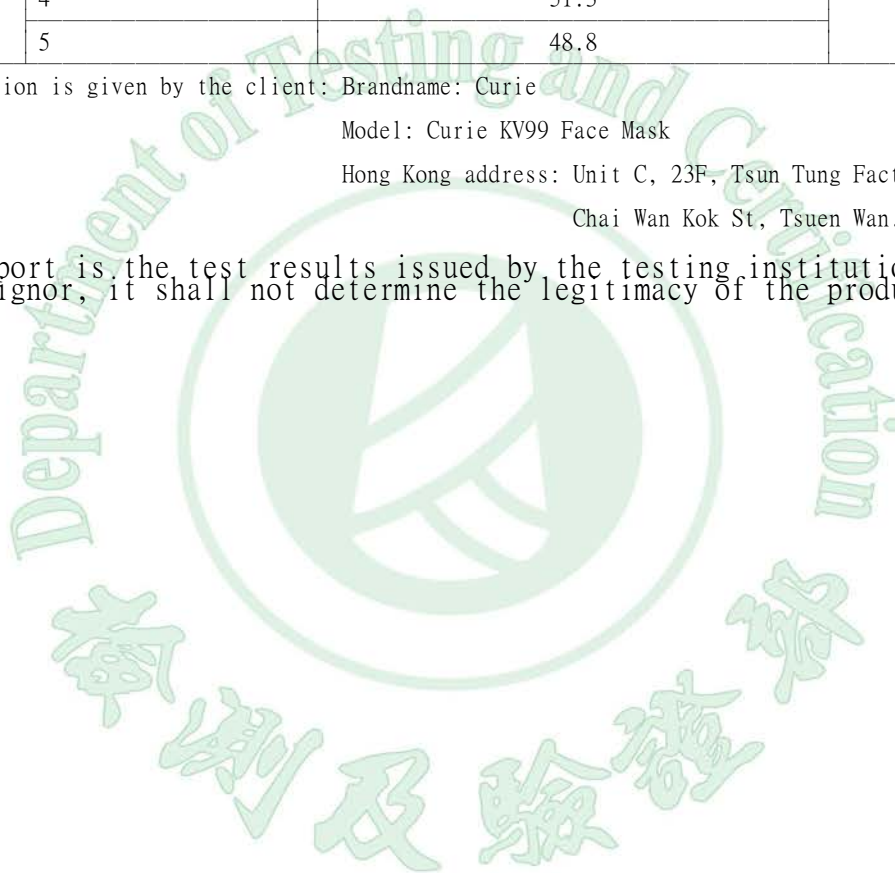
Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.



- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.
- 2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.
- 3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*

Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H599 Quantity: 1PC Page Order/Pages: (P2/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:120 mmHg (16.0 kPa)	1	None Seen	EN 14683:2019
	2	None Seen	ISO 22609:2004
	3	None Seen	
	4	None Seen	
	5	None Seen	
	6	None Seen	
	7	penetration	
	8	None Seen	
	9	None Seen	
	10	None Seen	
	11	None Seen	
	12	None Seen	
	13	None Seen	
	14	None Seen	
	15	None Seen	
	16	None Seen	

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H599 Quantity: 1PC Page Order/Pages: (P3/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:120 mmHg (16.0 kPa)	17	None Seen	EN 14683:2019
	18	None Seen	ISO 22609:2004
	19	None Seen	
	20	None Seen	
	21	None Seen	
	22	None Seen	
	23	None Seen	
	24	None Seen	
	25	None Seen	
	26	None Seen	
	27	None Seen	
	28	None Seen	
	29	None Seen	
	30	None Seen	
31	None Seen		
32	None Seen		

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H599 Quantity: 1PC Page Order/Pages: (P4/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Bacterial Filtration	1	> 99.9	EN 14683:2019 Annex B
Efficiency (BFE)(%)	2	99.9	
Staphylococcus aureus	3	99.9	
ATCC 6538	4	> 99.9	
	5	99.9	

Note: Control average: 2640 CFU.

Note: Mean particle size: 2.8 μm.

Note: Testing side: outside of specimen.

Note: Testing area: 39.5 cm<sup>2</sup>.

Note: Flow rate : 28.3 L/min.

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.
- 2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.
- 3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 07, 2020 Date of Receipt: Jul. 27, 2020

Report No.: TFF9G707 Quantity: 1PC Page Order/Pages: (P5/6) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Microbial cleanliness (cfu/g)	1	13.7	EN 14683:2019
	2	10.6	EN ISO 11737-1:2018
	3	4.4	
	4	10.1	
	5	11.0	

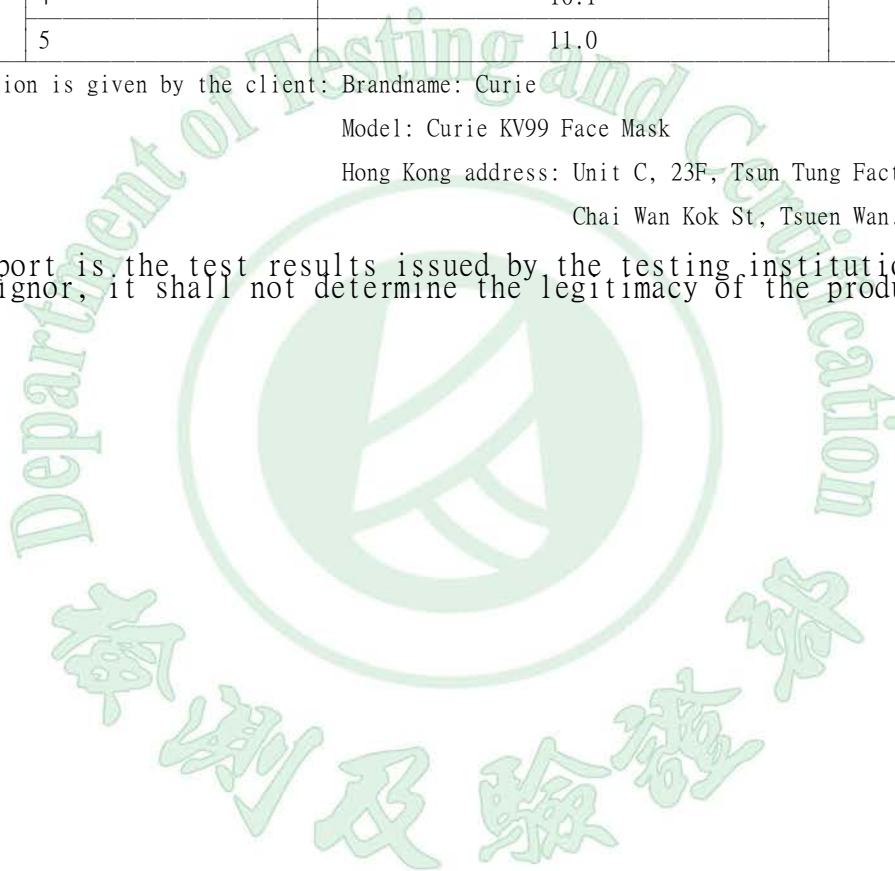
Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 Face Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.



- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.
- 2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.
- 3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

**Jui-hung kao**  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839





TEST REPORT TUCHENG

Date: Aug. 31, 2020 Date of Receipt: Aug. 24, 2020

Report No.: TFF9H599 Quantity: 1PC Page Order/Pages: (P5/5) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan



- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung Kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TFF9H599 數量 Quantity: 1件 報告頁次/頁數 Page Order/Pages: (P1/5) 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
空氣交換壓力 (Pa/cm <sup>2</sup> )	1	50.7
	2	49.1
	3	49.7
	4	51.3
	5	48.8
		EN 14683:2019 Annex C

註：依委託者所提供來樣資料為：Brandname: Curie  
 Model: Curie KV99 Face Mask  
 香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。



附記：1.本報告僅對樣品負責，樣品保留期限為一個月。  
 Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
 2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。  
 This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
 3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
 The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
 所長授權核發人：  
 Authorized by president of  
 Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
 Department of Testing and Certification, Taiwan Textile Research Institute  
 No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
 Tel : +886-2-22670321 ext. 7107, 7110  
 Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24  
 試驗報告 TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TFF9H599 數量 Quantity: 1件 報告頁次/頁數 (P2/5) Page Order/Pages: 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力:120 mmHg (16.0 kPa)	1	無穿透
	2	無穿透
	3	無穿透
	4	無穿透
	5	無穿透
	6	無穿透
	7	有穿透
	8	無穿透
	9	無穿透
	10	無穿透
	11	無穿透
	12	無穿透
	13	無穿透
	14	無穿透
	15	無穿透
	16	無穿透

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 Face Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。  
 Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
 2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。  
 This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
 3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
 The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
 所長授權核發人：  
 Authorized by president of  
 Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
 Department of Testing and Certification, Taiwan Textile Research Institute  
 No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
 Tel : +886-2-22670321 ext. 7107, 7110  
 Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TFF9H599 數量 Quantity: 1件 報告頁次/頁數 Page Order/Pages: (P3/5) 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力: 120 mmHg (16.0 kPa)	17	無穿透
	18	無穿透
	19	無穿透
	20	無穿透
	21	無穿透
	22	無穿透
	23	無穿透
	24	無穿透
	25	無穿透
	26	無穿透
	27	無穿透
	28	無穿透
	29	無穿透
	30	無穿透
31	無穿透	
32	無穿透	

註: 依委託者所提供來樣資料為: Brandname: Curie

Model: Curie KV99 Face Mask

香港地址: 香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註: 試驗報告僅就委託者之委託事項提供試驗結果, 不對產品合法性做判斷。

附記: 1. 本報告僅對樣品負責, 樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2. 本報告非經本檢測及驗證部書面同意, 不得摘錄複製, 但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3. 試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of  
Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 **試驗報告** 土城場區  
**TEST REPORT** TUCHENG

報告編號 Report No.: TFF9H599 數量 Quantity: 1件 報告頁次/頁數 (P4/5) 來文字號 Ref. No.: 空 白  
報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩

地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
細菌過濾效率(%)	1 > 99.9	EN 14683:2019 Annex B
金黃色葡萄球菌	2 99.9	
ATCC 6538	3 99.9	
	4 > 99.9	
	5 99.9	

註：對照組的平均菌落數：2640 CFU。

註：平均粒徑：2.8 μm。

註：測試面：外側。

註：測試面積：39.5 cm<sup>2</sup>

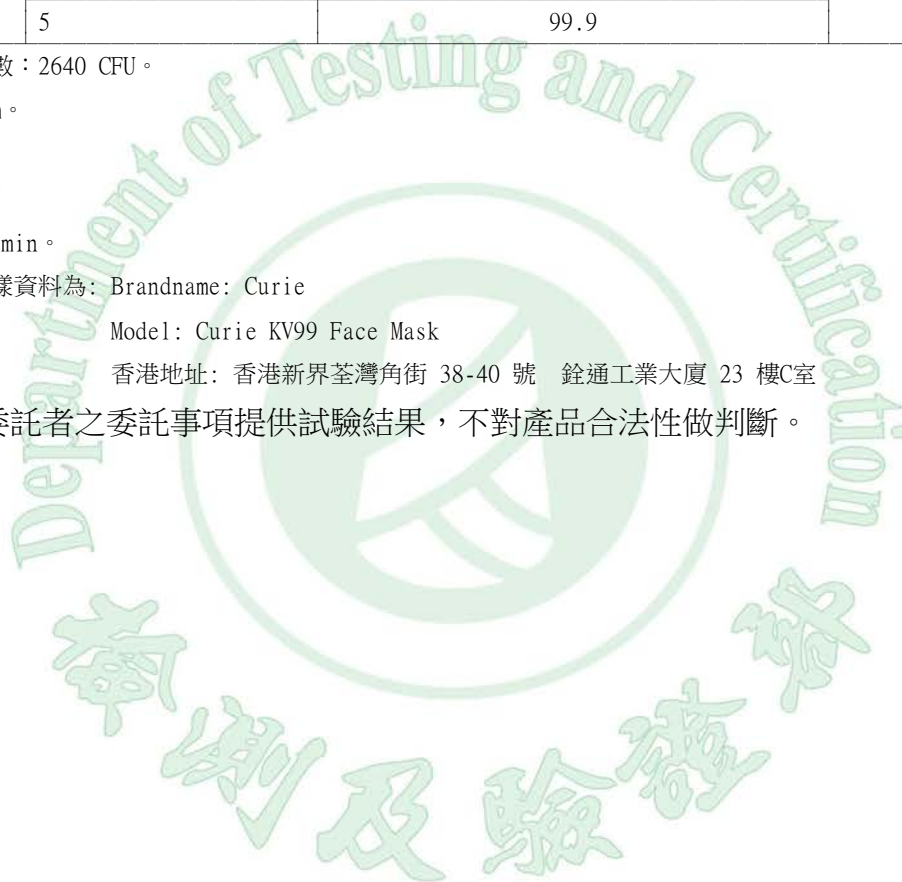
註：測試流量：28.3 L/min。

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 Face Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。



附記：1.本報告僅對樣品負責，樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of

Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 **試驗報告 TEST REPORT** 土城場區 TUCHENG

報告編號 Report No.: TFF9G707 數量 Quantity: 1件 報告頁次/頁數 Page Order/Pages: (P5/6) 來文字號 Ref. No.: 空 白

報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩

地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
微生物潔淨性 (cfu/g)	1	13.7
	2	10.6
	3	4.4
	4	10.1
	5	11.0
		EN 14683:2019
		EN ISO 11737-1:2018

註：依委託者所提供來樣資料為：Brandname: Curie  
Model: Curie KV99 Face Mask  
香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。



附記：1.本報告僅對樣品負責，樣品保留期限為一個月。  
Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。  
This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
所長授權核發人：  
Authorized by president of  
Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.31 收件日期 Date of Receipt: 2020.08.24 試驗報告 TEST REPORT 土城場區 TUCHENG  
報告編號 Report No.: TFF9H599 數量 Quantity: 1件 報告頁次/頁數 Page Order/Pages: (P5/5) 來文字號 Ref. No.: 空 白  
報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
地址 Address: 407 台中市西屯區甘河路108號



附記: 1.本報告僅對樣品負責, 樣品保留期限為一個月。  
Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.本報告非經本檢測及驗證部書面同意, 不得摘錄複製, 但全部複製除外。  
This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
所長授權核發人:  
Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏  
主 任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



TEST REPORT TUCHENG

Date: Aug. 07, 2020 Date of Receipt: Jul. 27, 2020

Report No.: TAG9G708 Quantity: 1PC Page Order/Pages: (P1/4) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Sub-Micron Particulate Filtration Efficiency(%) (0.1 μm PSL)	1	99.25	ASTM F2100-2019 9.3
	2	99.23	ASTM F2299-2017
	3	99.22	Flow rate:28.1
	4	99.16	(Liter/min)
	5	99.11	
	Ave.	99.19	
Air Exchange Pressure (mmH2O/cm <sup>3</sup> )	1	5.1	ASTM F2100-2019 9.2
	2	6.1	EN 14683:2019 Annex C
	3	5.6	
	4	5.1	
	5	4.7	

Note: 1mmH2O=9.8Pa.

Note: Air Exchange Pressure takes 5 masks for testing.

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 3D Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

**Jui-hung kao**  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839





TEST REPORT TUCHENG

Date: Aug.07,2020 Date of Receipt: Jul.27,2020

Report No.: TAG9G708 Quantity: 1PC Page Order/Pages: (P2/4) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:160 mmHg	1	None Seen	ASTM F2100-2019 9.4
	2	None Seen	ASTM F1862-2017
	3	None Seen	
	4	None Seen	
	5	None Seen	
	6	None Seen	
	7	None Seen	
	8	None Seen	
	9	None Seen	
	10	None Seen	
	11	None Seen	
	12	None Seen	
	13	None Seen	
	14	None Seen	
	15	None Seen	
	16	None Seen	

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 3D Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*

Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug.07,2020 Date of Receipt: Jul.27,2020

Report No.: TAG9G708 Quantity: 1PC Page Order/Pages: (P3/4) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan

Test Items		Test Results	Test Methods
Synthetic Blood Penetration Pressure:160 mmHg	17	None Seen	ASTM F2100-2019 9.4
	18	None Seen	ASTM F1862-2017
	19	None Seen	
	20	None Seen	
	21	None Seen	
	22	None Seen	
	23	None Seen	
	24	None Seen	
	25	None Seen	
	26	None Seen	
	27	None Seen	
	28	None Seen	
	29	None Seen	
	30	None Seen	
31	None Seen		
32	None Seen		

Note: Sample description is given by the client: Brandname: Curie

Model: Curie KV99 3D Mask

Hong Kong address: Unit C, 23F, Tsun Tung Factory Bldg 38-40

Chai Wan Kok St, Tsuen Wan. NT Hong Kong

Note: The test report is the test results issued by the testing institution as requested by the consignor, it shall not determine the legitimacy of the product.

- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



TEST REPORT TUCHENG

Date: Aug.07,2020 Date of Receipt: Jul.27,2020

Report No.: TAG9G708 Quantity: 1PC Page Order/Pages: (P4/4) Ref. No.: NIL

Report Title: Curie Limited(U3104) Item: Mask

Address: No. 108, Ganhe Rd., Xitun Dist., Taichung City 407, Taiwan



- Note: 1.This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.The test report should not be used for public advertisement and commercial promotion.

Authorized by president of  
Taiwan Textile Research Institute

*Jui-hung kao*  
Director,  
Department of Testing and  
Certification

Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 **試驗報告 TEST REPORT** 土城場區 TUCHENG

報告編號 Report No.: TAG9G708 數量 Quantity: 1件 報告頁次/頁數 (P1/4) Page Order/Pages: 來文字號 Ref. No.: 空白

報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩

地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果		試驗方法
微粒過濾效率 (0.1 μm PSL)	1	99.25	ASTM F2100-2019 9.3
	2	99.23	ASTM F2299-2017
	3	99.22	速度:28.1 (Liter/min)
	4	99.16	
	5	99.11	
	平均	99.19	
空氣交換壓力差 (mmH2O/cm <sup>2</sup> )	1	5.1	ASTM F2100-2019 9.2
	2	6.1	EN 14683:2019 Annex C
	3	5.6	
	4	5.1	
	5	4.7	

註: 1mmH2O=9.8Pa。

註: 空氣交換壓力差, 取5個樣品測試。

註: 依委託者所提供來樣資料為: Brandname: Curie

Model: Curie KV99 3D Mask

香港地址: 香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註: 試驗報告僅就委託者之委託事項提供試驗結果, 不對產品合法性做判斷。

附記: 1.本報告僅對樣品負責, 樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意, 不得摘錄複製, 但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of

Taiwan Textile Research Institute

檢測及驗證部 高瑞宏 主任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TAG9G708 數量 Quantity: 1件 報告頁次/頁數 (P2/4) Page Order/Pages: 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力:160 mmHg	1	無穿透
	2	無穿透
	3	無穿透
	4	無穿透
	5	無穿透
	6	無穿透
	7	無穿透
	8	無穿透
	9	無穿透
	10	無穿透
	11	無穿透
	12	無穿透
	13	無穿透
	14	無穿透
	15	無穿透
	16	無穿透

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 3D Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏 主任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 **試驗報告** TEST REPORT 土城場區 TUCHENG  
 報告編號 Report No.: TAG9G708 數量 Quantity: 1件 報告頁次/頁數 (P3/4) Page Order/Pages: 來文字號 Ref. No.: 空 白  
 報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
 地址 Address: 407 台中市西屯區甘河路108號

試驗項目	試驗結果	試驗方法
合成血液穿透性 壓力:160 mmHg	17	無穿透
	18	無穿透
	19	無穿透
	20	無穿透
	21	無穿透
	22	無穿透
	23	無穿透
	24	無穿透
	25	無穿透
	26	無穿透
	27	無穿透
	28	無穿透
	29	無穿透
	30	無穿透
31	無穿透	
32	無穿透	

註：依委託者所提供來樣資料為：Brandname: Curie

Model: Curie KV99 3D Mask

香港地址：香港新界荃灣角街 38-40 號 銓通工業大廈 23 樓C室

註：試驗報告僅就委託者之委託事項提供試驗結果，不對產品合法性做判斷。

附記：1.本報告僅對樣品負責，樣品保留期限為一個月。

Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.

2.本報告非經本檢測及驗證部書面同意，不得摘錄複製，但全部複製除外。

This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.

3.試驗報告所載事項不得作為公開廣告及商業推銷之用。

The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所

所長授權核發人:

Authorized by president of

Taiwan Textile Research Institute



紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
 Department of Testing and Certification, Taiwan Textile Research Institute  
 No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
 Tel : +886-2-22670321 ext. 7107, 7110  
 Fax : +886-2-22675108, +886-2-22689839



日期 Date: 2020.08.07 收件日期 Date of Receipt: 2020.07.27 試驗報告 TEST REPORT 土城場區 TUCHENG  
報告編號 Report No.: TAG9G708 數量 Quantity: 1件 報告頁次/頁數 (P4/4) Page Order/Pages: 來文字號 Ref. No.: 空 白  
報告抬頭 Report Title: 居安有限公司(U3104) 試件類別 Item: 口罩  
地址 Address: 407 台中市西屯區甘河路108號



附記: 1.本報告僅對樣品負責,樣品保留期限為一個月。  
Note: This report is only responsible for the submitted sample(s), which will be kept for one month period.  
2.本報告非經本檢測及驗證部書面同意,不得摘錄複製,但全部複製除外。  
This report cannot be reproduced in any way, except in full context, without the prior approval in writing of this Department of Testing and Certification.  
3.試驗報告所載事項不得作為公開廣告及商業推銷之用。  
The test report should not be used for public advertisement and commercial promotion.

財團法人紡織產業綜合研究所  
所長授權核發人:  
Authorized by president of  
Taiwan Textile Research Institute

檢測及驗證部 高瑞宏  
主 任

紡織產業綜合研究所檢測及驗證部 新北市土城區承天路6號  
Department of Testing and Certification, Taiwan Textile Research Institute  
No.6, Chengtian Rd., Tucheng Dist., New Taipei City 23674, Taiwan (R.O.C.)  
Tel : +886-2-22670321 ext. 7107, 7110  
Fax : +886-2-22675108 , +886-2-22689839



香港公開大學  
THE OPEN UNIVERSITY  
OF HONG KONG

政府創辦·多元創新

Government established · Diversified and innovative

### TEST REPORT

Applicant: Curie Limited  
Room C, 23/F,  
Tsuen Tung Factory Building,  
38-40 Chai Wan Kok Street,  
Tsuen Wan,  
New Territories,  
Hong Kong

Report number: IRITS202005150001

Date: 15 May 2020

Attn.: Aldrin Or

#### Sample Description as Declared:

No. of Sample: TWO (2) pieces of received material in zipper bag packaging  
Sample Description: Curie Ultrahigh- Efficiency Viral Filter  
Colour: White  
Date Received: 8 May 2020  
Testing Period: 9 – 14 May 2020  
Tests Conducted: As requested by the Applicant, with the details as follow:

Testing Summary: The sample being tested was conditioned for a minimum of 4 hour at  $21 \pm 5$  °C and relative humidity of  $65 \pm 5$  %. The bacterial filtration efficiency (BFE) test was performed by applying a spray of challenge bacterium *Staphylococcus aureus* in peptone water (approximately 2,200 colony forming units per spray) using a trigger sprayer. The sprayed aerosol was then drawn through the material being tested following by a tryptic soy agar plate under vacuum (flow rate: 100 Litres per minute). Number of *Staphylococcus aureus* colonies formed on the tryptic soy agar plate were counted after incubated at  $37 \pm 2$  °C for  $48 \pm 4$  hr. The BFE test procedure was modified from ASTM F2101: 2019.

For and on behalf of  
Institute for Research in Innovative Technology & Sustainability  
The Open University of Hong Kong

Dr. Eric Tung-po Sze  
Director





Report number: IRITS202005150001

Date: 15 May 2020

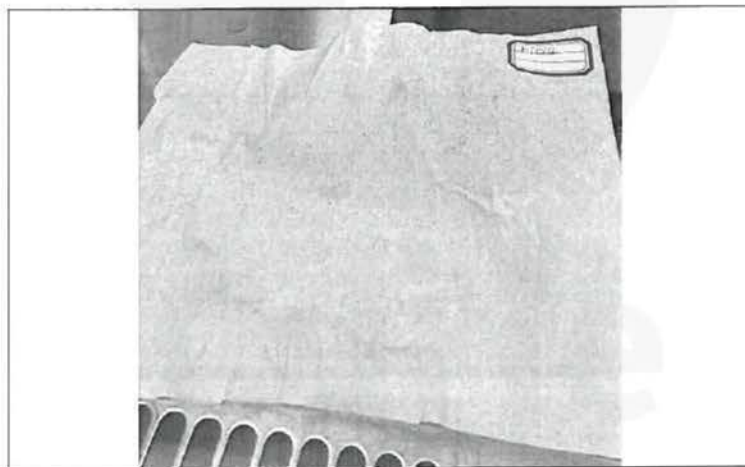
Results:

Test Sample Number

Test Sample Number	Bacterium Colonies Formed
#1	N.D. <sup>a</sup>
#2	N.D. <sup>a</sup>
Negative Control	N.D. <sup>a</sup>

<sup>a</sup> None Detected (N.D.) – There were no detected bacterium colony of *Staphylococcus aureus* found.

Sample Photo:



<End of Test Report>



**TEST REPORT**

Applicant: Curie Limited  
Room C, 23/F,  
Tsuen Tung Factory Building,  
38-40 Chai Wan Kok Street,  
Tsuen Wan,  
New Territories,  
Hong Kong

Report number: IRITS2020007030001

Date: 3 July 2020

Attn.: Aldrin Or

Sample Description as Declared:

No. of Sample: TWO (2) pieces of composite material for face mask in zipper bag packaging  
Curie KV99  
Colour: White  
Date Received: 15 June 2020  
Testing Period: 16 – 24 June 2020  
Tests Conducted: As requested by the Applicant, with the details as follow:

Testing Summary: The sample(s) were conditioned at an acceleration temperature of 120 °C for 48 hours, followed by pre-conditioning at a minimum of 4 hour at 21 ± 5 °C and relative humidity of 65 ± 5 %. Bacterial filtration efficiency (BFE) test was then performed by spraying the samples with an aerosol of challenge bacterium *Staphylococcus aureus* in peptone water using a nebulizer. The aerosol was then drawn through the samples following by a tryptic soy agar plate under vacuum (flow rate: 100 Litres per minute). Number of *Staphylococcus aureus* colonies formed on the tryptic soy agar plate were counted after incubated at 37 ± 2 °C for 48 ± 4 hr. The BFE test procedure was modified from ASTM F2101: 2019.

For and on behalf of  
Institute for Research in Innovative Technology & Sustainability  
The Open University of Hong Kong

---

Dr. Eric Tung-po Sze  
Director

Report number: IRITS2020007030001

Date: 3 July 2020

Results:

Test Sample Number	Bacterium Colonies Formed	Bacterial Filtration Efficiency
#1	N.D. <sup>a</sup>	> 99 %
#2	N.D. <sup>a</sup>	> 99 %
Negative Control	N.D. <sup>a</sup>	N/A <sup>b</sup>

<sup>a</sup> None Detected (N.D.) – There were no detected bacterium colony of *Staphylococcus aureus* found

<sup>b</sup> N/A – Not Applicable

Remark: The time and temperature selected for the acceleration conditioning were based on ASTM Standard F1980-16 Appendix X1. Accelerated aging of polymers, which are equivalent to five year of room-temperature (20 °C) aging, with an aging factor  $Q_{10} = 2.0$ .

Sample Photos:



<End of Test Report>



**TEST REPORT**

Applicant: Curie Limited  
Room C, 23/F,  
Tsuen Tung Factory Building,  
38-40 Chai Wan Kok Street,  
Tsuen Wan,  
New Territories,  
Hong Kong

Report number: IRITS2020007130001R1

Date: 23 July 2020

Attn.: Aldrin Or

Sample Description as Declared:

No. of Sample: ONE (1) piece of textile material in zipper bag packaging said to be RT-2007-T0430-DC020

Colour: White

Date Received: 21 May 2020

Testing Period: 2 – 10 July 2020

Tests Conducted: As requested by the Applicant to determine the antibacterial activity of the sample with reference to BS EN ISO 20743: 2013 Clause 8.2 Transfer method, with the following deviation:

- Shake-out the bacteria from specimens using peptone water instead of neutralizing solution.

For and on behalf of  
Institute for Research in Innovative Technology & Sustainability  
The Open University of Hong Kong

---

Dr. Eric Tung-po Sze  
Director

Report number: IRITS2020007130001R1

Date: 23 July 2020

Results:

Specimen	Conditions	Number of bacteria <sup>a</sup> (CFU per specimen)
#1	Shake-out before incubation	0
#2	Shake-out after incubation	0

<sup>a</sup>1 millilitre of an inoculum of *Staphylococcus aureus* with concentration of  $1 \times 10^6$  CFU/ml to  $3 \times 10^6$  CFU/ml was applied onto an agar plate in the transfer method, where each specimen was set on the agar surface and weigh down with a 200 g stainless-steel cylinder for  $60 \text{ s} \pm 5 \text{ s}$  to transfer the microbial content. Incubation Measurement of the number of bacteria colonies was conducted in accordance with the plate count method specified in Annex C of BS EN ISO 20743:2013.

Opinion(s) and Interpretation(s): Based on the results obtained above, the specimens demonstrated effective antibacterial property to kill bacteria during transfer phase of the experiment.

Note: This Report replaces Report number IRITS2020007130001, which has been obsoleted.

<End of Test Report>



**广微测**  
Gmicro Testing



中国认可  
国际互认  
检测  
TESTING  
CNAS L1747

**GUANGDONG DETECTION CENTER OF MICROBIOLOGY**

**REPORT FOR ANALYSIS**

**Report №.**

2020FM20686R01E

**Name of Sample**

Curie Ultrahigh-Efficiency Viral Filter for KV-99

**Applicant**

Shenzhen Qianhai e-Cycle Trading Co.,Ltd.

**Test Type**

Entrustment Test

**Address: Building 66, No.100 Central Xian Lie Road, Guangzhou, China**

**Postcode: 510070**

**Tel: +86 20 87137666**

**Fax : +86 20 87137668**

**Website : www.gddcm.com**



GUANGDONG DETECTION CENTER OF MICROBIOLOGY



REPORT FOR ANALYSIS

Report №.:2020FM20686R01E Verification Code: 03658924

Name of Sample	Curie Ultrahigh-Efficiency Viral Filter for KV-99	Test Type	Entrustment Test
Applicant	Shenzhen Qianhai e-Cycle Trading Co.,Ltd.	Address	2/F Building B2, Yintian Industrial Area, Xixiang Street, Baoan District, Shenzhen Guangdong, China
Sample Source	Submitted for Testing by the Applicant	Sample Quantity	260cm*2m
Spec and Lot № of Sample	40g; 1001	State and Characteristic	Flaky
Sample Received Date	2020-07-15	Test Completion Date	2020-07-28
Test Standard and Method	ISO 18184: 2014 (E)		
Item Tested	Antiviral activity test		
Test Conclusion	<p>The test data of the sample(s) is attached to the page(s) of this report.</p> <p style="text-align: right;">Issue Date: 2020-08-13 (Official Seal)</p>		
Remarks	<p>1.Manufacturer: Curie Limited. (provided by the applicant) 2.Trademark: Curie; The date of production: 2020-06-01. (provided by the applicant)</p>		

Editor: Chen Yingting

Verifier: Li Sujuan

Approver: Xie Xiaobao



GUANGDONG DETECTION CENTER OF MICROBIOLOGY

ANALYSIS AND TEST RESULT

Report No.: 2020FM20686R01E

Virus and host cell	No.	The logarithm of infectivity titre value immediate after inoculation of the reference specimen (lgTCID <sub>50</sub> /bottle)	The logarithm of infectivity titre value after 2h contacting with the reference specimen (lgTCID <sub>50</sub> / bottle)	The logarithm of infectivity titre value after 2h contacting with the test specimen (lgTCID <sub>50</sub> / bottle)
H3N2 <i>Influenza A virus</i> Host cell: MDCK	1	7.05	6.50	2.10
	2	6.97	6.63	2.30
	3	7.10	6.59	2.30
lgTCID <sub>50</sub> / bottle Average		7.04	6.57	2.33
Logarithm of antiviral activity		4.34		
Antiviral activity rate (%)		99.99		

(Blank below)





Report №.: 2020FM20686R01E

## Notice Items

1. The Test report is invalid if not affixed with Authorized Stamp of Test and Paging Seal.
2. The Test report is invalid without signature of verifier and approver.
3. The Test report is invalid if being supplemented, deleted or altered.
4. Without prior written permission, the report cannot be reproduced, except in full.
5. Unless otherwise stated, the results shown in this test report refer only to the sample(s) submitted.
6. Any dispute of the report must be raised to the testing body within 15 days after the report is received, exceeding which the dispute will not be accepted.
7. For the tested sample(s) submitted by the applicant, the sample information in the test report is provided by the applicant and the laboratory is not responsible for its authenticity.



# TEST REPORT

Technical Report: (5220)210-0555

August 5, 2020

Date Received: July 28, 2020

Page 1 of 8

Ken / Janus / Alice / Jacky Tsang  
Dakota  
Flat A&B 3/F, Fast Industrial Bldg.  
658 Castle Peak Road, Lai Chi Kok, Kowloon, Hong Kong  
/

**Product Name:** INTERLINING  
**Product End Use:** Blouses  
**Color Name / Article Number:** /  
**Color Code:** OFF-WHITE  
**H&M Order No.:** /  
**H&M Sample Type:** Raw Materials  
**Age Group:** Child 0-3 year-old  
**H&M Sample Stage:** D/S (Develop sample)  
**H&M Product Category:** Knit  
**Date of Testing:** July 28, 2020 – August 5, 2020  
**Number of Working Days:** 7  
**Priority:** REGULAR  
**Speed Order:** No  
**No. of sample provided:** /  
**Fiber Composition:** /  
**Care Instruction:** /

## SUMMARY OF TEST RESULTS

TEST REQUESTED	CONCLUSION	REMARK
Alkylphenols (AP) Content Test	PASS	
Alkylphenol Ethoxylates (APEO) Content Test	PASS	
Formaldehyde Content Test	PASS	
Chlorophenols Content Test	PASS	
Ortho-phenylphenol (OPP) Content Test	PASS	
pH Value Test in Textile and Artificial Leather	FAIL	
Phthalates Content Test	PASS	

### REMARK

If there are questions or concerns on this report, please contact:

(852) 2331 0330  
hmEnquiry@hk.bureauveritas.com

BUREAU VERITAS HONG KONG LTD.

MS. YANN LO  
MANAGER, ANALYTICAL



**Photo of the Submitted Sample**









## TEST RESULT

### Chlorophenols Content Test

**Test Method** : With reference to ISO 17070:2015 or 64 LFBG B 82.02-08 (Modified). Potassium hydroxide extraction, derivatisation and analysis by Gas Chromatograph Mass Spectrometer (GC-MS).

**Tested Item(s)** : I001 White fabric with transparent adhesive

<b>Maximum Limit:</b>	<b>0.5 mg/kg (Each)</b>			
<b>Tested Item(s)</b>	<b>Result</b>			<b>Conclusion</b>
	<b>Detected Analyte(s)</b>	<b>Conc.</b>	<b>Unit</b>	
I001	ND	ND	mg/kg	PASS

Note:

ND = Not detected  
ppm = part(s) per million = mg/kg  
Reporting Limit (mg/kg) : Each : 0.5

“>” = More than  
mg/kg = milligram(s) per kilogram

Remark:

- The list of chlorophenols is summarized in table of Appendix.

### Ortho-phenylphenol (OPP) Test

**Test Method** : 1 M KOH extraction, 16 hours at 90 degrees C, derivatization and analysis § 64 LFBG B 82.02-08 or DIN EN ISO 17070:2015.

**Tested Item(s)** : I001 White fabric with transparent adhesive

<b>Maximum Limit:</b>	<b>1000 mg/kg</b>		
<b>Tested Item(s)</b>	<b>Result</b>	<b>Unit</b>	<b>Conclusion</b>
I001	ND	mg/kg	PASS

Note:

ND = Not detected  
ppm = part(s) per million = mg/kg  
Reporting Limit (mg/kg) : 100

“>” = More than  
mg/kg = milligram(s) per kilogram



### APPENDIX

<b>List of Alkylphenols :</b>					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Octylphenol (OP)	Various (140-66-9, 27193-28-8, 1806-26-4)	2	Nonylphenol (NP)	Various (25154-52-3, 104-40-5, 84852-15-3, 11066-49-2)
CAS-No. = Chemical Abstracts Service registry number					

<b>List of Alkylphenol Ethoxylates :</b>					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Octylphenoethoxylates (OPEOs)	Various (9002-93-1, 9036-19-5, 68987-90-6)	2	Nonylphenoethoxylates (NPEOs)	Various (9016-45-9, 26027-38-3, 127087-87-0, 37205-87-1, 68412-54-4)
CAS-No. = Chemical Abstracts Service registry number					

<b>List of Chlorophenols :</b>					
No.	Name of Analytes	CAS-No.	No.	Name of Analytes	CAS-No.
1	Pentachlorophenol (PCP) and its salts and esters	87-86-5	3	Trichlorophenol (TriCP) and its salts and esters: 2,3,5- Trichlorophenol; 2,3,6- Trichlorophenol & 2,4,5- Trichlorophenol; 2,4,6- Trichlorophenol; 3,4,5- Trichlorophenol & 2,3,4- Trichlorophenol	933-78-8; 933-75-5 & 95-95-4; 88-06-2; 609-19-8 & 15950-66-0
2	Tetrachlorophenol (TeCP) and its salts and esters: 2,3,5,6- Tetrachlorophenol 2,3,4,6- Tetrachlorophenol 2,3,4,5- Tetrachlorophenol	935-95-5 58-90-2 4901-51-3	-	-	-
CAS-No. = Chemical Abstracts Service registry number					



## APPENDIX

<b>List of Phthalates :</b>					
<b>No.</b>	<b>Name of Analytes</b>	<b>CAS-No.</b>	<b>No.</b>	<b>Name of Analytes</b>	<b>CAS-No.</b>
1	Butyl benzyl phthalate (BBP)	85-68-7	12	Di-iso-pentyl phthalate (DIPP)	605-50-5
2	Dibutyl phthalate (DBP)	84-74-2	13	n-Pentyl-iso-pentyl phthalate (NPIPP)	776297-69-9
3	Di-2-ethylhexyl phthalate (DEHP)	117-81-7	14	Di-cyclohexyl phthalate (DCHP)	84-61-7
4	Di-iso-butyl phthalate (DIBP)	84-69-5	15	Di-iso-octyl phthalate (DIOP)	27554-26-3
5	Di-n-octyl phthalate (DNOP)	117-84-0	16	Di-n-pentyl phthalate (DPP)	131-18-0
6	Di-iso-nonyl phthalate (DINP)	28553-12-0	17	Dihexyl phthalate, branched and linear	68515-50-4
7	Di-iso-decyl phthalate (DIDP)	26761-40-0	18	Dimethyl phthalate (DMP)	131-11-3
8	Bis(2-methoxyethyl) phthalate (DMEP)	117-82-8	19	1,2-benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0
9	Di-n-hexyl phthalate (DHP)	84-75-3	20	1,2-benzenedicarboxylic acid, di-C7-11-branched and linear, alkyl esters (DHUNP)	68515-42-4
10	Diethyl phthalate (DEP)	84-66-2	21	1,2-benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6
11	Di-n-propyl phthalate (DPRP)	131-16-8	22	1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl and octyl diesters with $\geq 0.3\%$ of dihexyl phthalate; 1,2-Benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters; 1,2-Benzenedicarboxylic acid, di-C6-10-alkyl esters	68515-51-5 68648-93-1
CAS-No. = Chemical Abstracts Service registry number					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
62/988,900	03/12/2020		85	WIPC2002		

166693  
Law Offices of Sergei Orel, LLC  
2125 Center Avenue, Suite 616  
Fort Lee, NJ 07024

**CONFIRMATION NO. 9401  
UPDATED FILING RECEIPT**



0000000118340387

Date Mailed: 07/09/2020

Receipt is acknowledged of this provisional patent application. It will not be examined for patentability and will become abandoned not later than twelve months after its filing date. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

**Please verify the accuracy of the data presented on this receipt.** If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt identifying the requested changes, preferably by including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

**Inventor(s)**

Jianliang GONG, Yau Ma Tei, HONG KONG;  
Chun Yin OR, Cheung Sha Wan, HONG KONG;

**Applicant(s)**

Jianliang GONG, Yau Ma Tei, HONG KONG;  
Chun Yin OR, Cheung Sha Wan, HONG KONG;

**Power of Attorney:**

Michael Yablonsky--40407

**Permission to Access Application via Priority Document Exchange: Yes**

**Permission to Access Search Results: Yes**

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

**If Required, Foreign Filing License Granted: 04/02/2020**

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 62/988,900**

**Projected Publication Date:** None, application is not eligible for pre-grant publication

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* MICRO ENTITY \*\***

Title

Air Filtration System and Manufacturing Method Therefor

**Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No**

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

### **LICENSE FOR FOREIGN FILING UNDER**

**Title 35, United States Code, Section 184**

**Title 37, Code of Federal Regulations, 5.11 & 5.15**

#### **GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

#### **NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

---

### **SelectUSA**

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



In reply please quote this ref.: 32020008506.8

Your ref.: C200101/UM1HK

Tel.: 3543 1464

Fax.: 2838 6315

eMode

08 June, 2020

WORLD IP CONSULTANCY  
Unit B, 3/F, Cheong Yu Bldg  
No. 143-151 Castle Peak Rd, Yuen Long  
HONG KONG

**Application for Grant of a Short-term Patent  
Under Application No. 32020008506.8**

We refer to your application for a short-term patent lodged on 02 June, 2020.

The above application is found to have satisfied the minimum requirements as laid down in section 114(2) of the Patents Ordinance. The accorded date of filing is 02 June, 2020.

In general, you will receive our further letter for the application at least five months after the date of this letter. If you do not receive any letter from us after this period, please contact us at 2961 6901.

*This is a letter issued by Nigel LEE for Registrar of Patents.*

(This is a computer-generated copy. No signature is required.)



