



研路天

## Antiviral Underwear

### Certifications

1. WEIPU Shanghai Antiviral activity [HCoV-229E] Test Method ISO18184 : 2019 Test Report  
上海微譜 - 抗病毒活性測試 [人類冠狀病毒 229E ] 報告 測試標準 ISO18184:2019
2. ZKGC Inspection and Certification Antiviral activity [HPV-16] Test Method ISO18184 : 2019 Test Report  
中科國創 - 抗病毒活性測試 [人乳頭瘤病毒 16 型 ] 報告 測試標準 ISO18184:2019
3. GTTC -Antimicrobial activity ASTM E 2149-2020 Candida albicans Test Report  
廣州檢驗檢測認證集團 - 抗菌活性測試[白色念珠菌]報告 測試標準 ASTM E 2149-2020
4. GTTC -Antimicrobial activity T/GDBX 056-2022 (Level AAAAAAA) Lining Fabric Test Report[Staphylococcus aureus, Colon bacillus, Candida albicans] (150 washes)  
廣州檢驗檢測認證集團 - 抗菌活性測試 AAAAAAA 級報告 測試標準 T/GDBX 056-2022[大腸桿菌、金黃色葡萄球菌、白色念珠菌] 150 次洗水
5. GTTC – GB/T 35263-2017 Textiles-Testing and evaluation for cool feeling in contact instant Test Report  
廣州檢驗檢測認證集團 –紡織品接觸涼感係數報告 測試標準 GB/T 35263-2017
6. GTTC – GB/T 21655.2-2019 Textiles-Evaluation of absorption and quick-drying Test Report  
廣州檢驗檢測認證集團 –紡織品吸濕速乾性報告 測試標準 GB/T 21655.2-2019
7. GTTC – GB/T 5453-1997 Air permeability Test Report  
廣州檢驗檢測認證集團 –透氣性報告 測試標準 GB/T 5453-1997
8. GTTC – FZ/T 73024-2014 Knitted underwear with chemical fibres Test Report

廣州檢驗檢測認證集團 - 化纖針織內衣 測試標準 FZ/T 73024-2014

9. SGS – SL92409288553001TX Moisture Management Tester

Report No. -JC-

Sample \_\_\_\_\_

Origin Customer Sample  
\_\_\_\_\_

Address: \_\_\_\_\_  
nd \_\_\_\_\_ 62  
2 Floor, Astoria House, Shaftesbury Avenue,  
London, England W1D 6LT, United Kingdom  
\_\_\_\_\_

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Shanghai WEIPU Chemical Technology Service Co., Ltd



No. : WP-21096414-JC-04En Page(s)

The following sample(s) was/were submitted and identified on behalf of the applicant:

Sample Name : INNOTIER Champion Series woven fabric with Ionic+

Sample Description : Champion Series Anti-Viral PPE material - 100X wash

Type : WNE53001

Brand : INNOTIER

Applicable : INNOTOUCH gloves, underwear, garments and accessories, AgDESMO garments and accessories

Testing information:

Date of Sample Received : 2021-09-23

Testing Period : 2021-09-26~ 2021-10-13

Test Item(s) : Selected test (s) as requested by client.

Test Criterion : Please refer to next page(s).

Test Result : Please refer to next page(s).

Complied by :

Yingying Shao

Approved by

JJ Lee

Issued Date

2021 19

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No. : WP-21096414-JC-04En Page(s) 2

Test Item(s): \*Antiviral Activity [HCoV-229E ]  
 Test Standard and Method: ISO 18184:2019

Test Instruments: Biosafety Cabinet

Test Result(s):

Virus Types	NO	lg(Va <sub>0h</sub> ) (lgTCID <sub>50</sub> /ml)	b <sub>24h</sub> ) (lgTCID <sub>50</sub> /ml)	lg(Vc <sub>24h</sub> ) (lgTCID <sub>50</sub> /ml)
HCoV-229E MDCK cells	1	6.57	6.54	4.41
	2	6.55	6.53	4.42
	3	6.54	6.51	4.44
Average Value of lgTCID <sub>50</sub> /ml		6.55	6.53	4.42
Antiviral Activity Value			2.13	
Antiviral Activity Rate (%)			99.26	

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\*\*\*End of the Page\*\*\*

术服务  
测专用

## Report

- 1.
- 2.
- 3.

No. : WP-21096414-JC-04En Page(s)

Sample picture(s):



\*\*\*End of the Report\*\*\*

—DECLARE—

The report is invalid without the stamp of "Special Seal for Inspection or Testing" or without "Special Seal for the Report" or without the signature of the compiler and the approver.

No unauthorized changes, additions or deletions shall be made to the report.

Neither fragmented report nor its incomplete copy shall be deemed valid. The complete copy is invalid without the stamp of "Special Seal for Inspection or Testing" or "Special Seal for the Report".

Any queries on the report shall be presented to us within 15 working days after receipt of the report.

The results described here in this report are based on the sample(s) tested. The data and results shown in the report without CMA logo are not used as proof for society, only for internal uses.

The applicant takes full responsible for the truthfulness of the testing sample(s) and information related thereto.

Without the permission of the company, any party is prohibited from using the test results and the report for undue publicity.

With the permission of the client, the items with \* in this report is/are subcontracted from other laboratory.



## Report

5.

6.

7.

8.



# 测试报告

## TEST REPORT

No: ZK2024031405-2

样品名称 专利黑科技抗菌环保内裤 Antiviral underwear

Sample Name

委托单位 研路天科技有限公司 INNOTIER Limited

Inspection Requestor

检验类别 委托测试

Inspection Category

中科国创检验认证有限公司

Zhongke Guochuang

Inspection and Certification Co., Ltd



# 注 意 事 项

- 1、检验结论栏无“检验检测专用章”无效，报告未加盖骑缝章无效。部分复制无效，或全文复制报告未重新加盖本公司“检验检测专用章”无效。
- 2、报告无主检、审核、批准人签字无效。报告涂改无效。
- 3、本报告未经本公司同意，不得用于产品标签、包装、广告等宣传活动。
- 4、本公司对样品检测结果的准确性负责，委托方对所提供的样品及其相关信息的真实性负责。
- 5、对检测报告若有异议，应于收到报告之日起 15 日内向本公司提出。
- 6、本报告仅提供给委托方，本公司不承担其他方应用本报告所产生的责任。

中科国创检验认证有限公司  
GuochuangInspection and Certification

Zhongke

测试报告

Co., Ltd

TEST REPORT

No:ZKGC-CS-2024031405-2

共 3 页 第 1 页

样品名称 Sample Name	专利黑科技抗菌环保内裤 Antiviral underwear	检验类别 Inspection Category	委托测试
受检单位(人) Subject unit (People)	/		
生产/供货单位 Production/Supply Unit	广州市凯权服饰有限公司 GuangZhou JF Gloves & Garment Accessories Co., Ltd		
委托单位 Inspection Requestor	研路天科技有限公司 INNOTIER Limited		
标称商标 Nominal Mark	/	样品等级 Sample Grade	/
规格型号 Specification	/	生产日期 Production Date	/
抽样日期 Sampling Date	/	抽样地点 Sampling Address	/



抽样基数  
Sampling Base

进货量  
Replenishment  
Quantity

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# 测试报告

抽样人 Sample Jerker	/	样品状态 Sample Condition	固态
样品数量 Sample Quantity	1	到样日期 Received Date	2024.02.25
检验日期 Inspection Date	2024.02.25	环境条件 Environmental Condition	符合
抽样单编号 Sampling list Number	/	检验项目 Inspection Items	详见下页
主要仪器及编号 Main Instruments and Number	/		
检验依据 Inspection Regulations	ISO 18184: 2019		

## TEST REPORT

No: ZKGC-CS-2024031405-2

共 3 页 第 2 页

检验结论 Inspection Conclusion	<p>(检验检测专用章) (Seal for Inspection) 见测试详情页 签发日期: 2024 年 03 月 15 日</p> 
-------------------------------	--

样品照片

Sample photos



备注 Remark	产品已经 200 次水洗 The product has been washed 200 times.
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主检: 李博

审核: 孙亮

批准: 高大伟

**中科国创检验认证有限公司**  
**Zhongke Guochuang Inspection and Certification Co., Ltd**

**测试报告**  
**TEST REPORT**

No: ZKGC-CS-2024031405-2

共 3 页 第 3 页

序号 Serial number	实验病毒 Experimental virus	组别 group	病毒感染滴度对数值 Viral infection titer		平均病毒感染滴度 Average viral infection titer (TCID <sub>50</sub> /0.1m <sup>3</sup> )	
			logarithmic value (lgTCID <sub>50</sub> /0.1m <sup>3</sup> )			
			结果	平均值		
1	HPV-16 (宿主细胞 MDCK)	0h	对照组 1	5.20	5.10	4.5×10 <sup>4</sup>
			对照组 2	5.00		
			对照组 3	5.10		
		1h	对照组 1	4.88	4.7×10 <sup>4</sup>	
			对照组 2	4.97		
			对照组 3			



对照组  
3

4.99

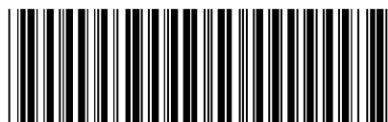
95

IDENTENTIAL

		实验组 1	<0.05	<0.05	12
		实验组 2	<0.05		
		实验组 3	<0.05		

# Test Report

(Electronic version)



No: 210233989

Verification Website: [www.gttc.net.cn](http://www.gttc.net.cn)

Verification Code: KVVU-2509-24

扫码下载报告



Issue Date: 2021-08-11

Applicant: INNOTIER Limited  
Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United Kingdom

Information confirmed by applicant:

WNE53001 Fabric 50cm×50cm

Brand: INNOTIER

Colour: Gray

Fibre Content: 53%Polyamide 30%Ionic 17%Spandex

Basis of judgement:  
---

Date Received/Date Test Started: 2021-08-02

Conclusion:

Antimicrobial activity

Note: "M"-Meet the standard's requirement "F"-Fail to meet the standard's requirement  
"---"-No comment

Remark:

All the tested items are tested under the standard condition (except for indication).

Copies of the report are valid only re-stamped.

The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P.R.China.

Approved By:

JuXiang Zhong Engineer

解香祥

# Test Report

(Electronic version)

No:210233989

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Antimicrobial activity(%)

---

(ASTM E 2149-2020, Time of inhibiting bacteria: 24 hours)

Inhibition:

Candida albicans

99.14

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# Test Report



Verification Website: [www.gttctech.com](http://www.gttctech.com)

Verification Code : DJWK-7461-44

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No: 240027407MO

Issue Date 签发日期: 2024-02-24

Applicant: INNOTIER Limited

委托单位: 研路天科技有限公司

Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United

地址: Kingdom

英國倫敦沙夫茨伯里大街62號阿斯托利亞樓2層

Information confirmed by applicant 客户认定信息:

Antiviral Underwear 专利黑科技抗菌环保内裤

Quantity 数量: 6 pieces 6条

Fabric 面料

Quantity 数量: 2 pieces 2块100cm×100cm

Manufacturer 生产单位: GuangZhou JF Gloves & Garment Accessories Co., Ltd.

广州市凯权服饰有限公司

Basis of judgement 判定依据:

T/GDBX 056-2022 <Antibacterial textiles> 《抗菌纺织品》

Date Received/Date Test Started: 2024-02-04

样品受理/测试开始日期: 2024-02-04

Conclusion 结论:

The testing results conform with the quality requirements of standard T/GDBX 056-2022. 样品所检项目符合T/GDBX 056-2022标准要求。

Antimicrobial activity (Level AAAAAAA) [Lining fabric] M

抗菌效果AAAAA级[底裆布料]

Approved By(签发):

刘丽琴 高级工程师

LiQin Liu Senior Engineer

LiQin Liu



# Test Report



Verification Website: [www.gttctech.com](http://www.gttctech.com)

Verification Code : DJWK-7461-44

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No: 240027407MO

Issue Date 签发日期: 2024-02-24

Note: "M"-Meet the standard's requirement "F"-Fail to meet the standard's requirement

"---"-No comment

备注: "M" -符合标准要求 "F" -不符合标准要求

"---" -此项目不判定

## Remark:

The decision indicators are derived from the standard required by client T/GDBX 056-2022). Our inspection capacity authorized by CMA covers the inspection items of T/GDBX 056-2022.

判定指标来源于客户要求的T/GDBX 056-2022。我单位获CMA认定授权的检验能力覆盖T/GDBX 056-2022所列项目。

This report replaces test report 240027407 which has become invalid automatically.

本报告代替240027407报告，同时240027407报告作废。

All the tested items are tested under the standard condition (except for indication).

本报告中检验检测项目均在相应标准规定的环境下进行（有注明的除外）。

Copies of the report are valid only re-stamped.

复印件、副本未重新加盖报告书确认章无效。

The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P.R.China.

本报告检验检测地址为广州市番禺区珠江路1号。

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Approved By(签发):

刘丽琴 高级工程师

LiQin Liu Senior Engineer

LiQin Liu





# Test Report

No: 240027407M0





# Test Report

No: 240027407M0



# Test Report

No: 240027407M0



# Test Report

No: 240027407M0



# Test Report

No: 240027407M0



# Test Report

No: 240027407M0



# Test Report

No: 240027407M0



# Test Report

No: 240027407 M0

Antimicrobial activity (Level AAAAAAA) [Lining fabric] 抗菌效果AAAAAAA 级[底裆布料]

Test method 测试方法:  
GB/T 20944.3-2008

Shake flask method 振荡法

Sterilization of samples: Sterilized in autoclave 样品灭菌方法: 高压蒸汽灭菌

Contact time: 18h 样品与菌液接触培养时间: 18h

Control fabric: 100% cotton fabric 对照样品: 100%纯棉织布

Washing by household double-barrel washing machine, 150 washings 家用双桶洗衣机洗涤方法, 洗涤 150 次

Concentration of bacterium 菌液浓度:

Staphylococcus aureus ATCC 6538 金黄色葡萄球菌 ATCC 6538:  $2 \times 10^5$  CFU/mL

Colon bacillus 8099 大肠杆菌 8099:  $3.3 \times 10^5$  CFU/mL

Candida albicans ATCC 10231 白色念珠菌 ATCC 10231:  $3.1 \times 10^5$  CFU/mL

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# Test Report

No: 240027407 M0

Test result 检验检测结果:

Test bacteria 测试菌种	Number of bacteria 菌落总数 (CFU/mL)			Growth value F 增长值 F	Inhibition 抑菌率 (%)	Requirement 标准要求 (%)
	Control fabric 对照试样	Treated test specimen 抗菌试样				
	At "0h" contact time 0h 接触时间内	After "18h" contact time 培养 18h 后	After "18h" contact time 培养 18h 后			
Staphylococcus aureus 金黄色葡萄球菌	2.1 × 10 <sup>4</sup>	2.7 × 10 <sup>6</sup>	2.4 × 10 <sup>5</sup>	2.1	9	≥85
Col on bacillus 大肠杆菌	2.2 × 10 <sup>4</sup>	8.3 × 10 <sup>6</sup>	1.7 × 10 <sup>6</sup>	2.6	80	≥70
Candida albicans 白色念珠菌	2.0 × 10 <sup>4</sup>	6.1 × 10 <sup>5</sup>	4 × 10 <sup>5</sup>	1.5	77	≥70
The evaluation of antimicrobial activity 抗菌效果评价	---					
Basis of judgement 判定依据	T/GDB/T 056-2022					
Conclusion	Pass 符合					
Remark 备注	---					

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本报告结束(End





#### 注意事项

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3. 对委托送检结果有异议的，应于报告书送达之日起十五日内提出。
4. 检测结果仅对所检样品有效。
5. 未取得资质认定的项目，仅作为科研、教学或内部质量控制之用。
6. 报告书涂改无效。
7. 客户提供的信息（包括样品信息），本公司/中心不对其真实性负责。
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2. Copies of this report are invalid without authorized stamp.
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Verification Code: GQPS-8227-04

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No: 240044713

Issue Date 签发日期: 2024-03-11

Applicant: INNOTIER Limited  
委托单位: 研路天科技有限公司  
Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United Kingdom  
地址: 英國倫敦沙夫茨伯里大街62號阿斯托利亞樓2層

Information confirmed by applicant 客户认定信息:

INNOTIER 研路天抗菌无痕内裤 6条, 底裆面料 100cm×100cm

Brand 商标: 研路天

Manufacturer 生产单位: 广州市凯权服饰有限公司

Basis of judgement 判定依据:

GB/T 35263-2017 <Textiles--Testing and evaluation for cool feeling in contact instant> 《纺织品 接触瞬间凉感性能的检测和评价》

Date Received/Date Test Started: 2024-03-06

样品受理/测试开始日期: 2024-03-06

Conclusion 结论:

Coefficient of cool feeling in contact[Lining shell fabric] M

接触凉感系数[底裆面料布料]

Note: "M"-Meet the standard's requirement "F"-Fail to meet the standard's requirement

"---"-No comment

备注: "M"-符合标准要求 "F"-不符合标准要求

"---"-此项目不判定

Remark:

All the tested items are tested under the standard condition (except for indication).

本报告中检验检测项目均在相应标准规定的环境条件下进行(有注明的除外)。

Copies of the report are valid only re-stamped.

复印件、副本未重新加盖报告书确认章无效。

The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P. R. China.

本报告检验检测地址为广州市番禺区珠江路1号。

Approved By(签发):

刘圆 工程师

Yuan Liu Engineer

Yuan Liu



# Test Report

No: 240044713



# Test Report

No: 240044713



# Test Report

No: 240044713

Coefficient of cool feeling in contact(J/ (cm<sup>2</sup>·s)) [Lining shell fabric ] M  
接触凉感系数(J/ (cm<sup>2</sup>·s)) [底裆面料布料]

(GB/T 35263-2017, Table material 载样台材质: Polystyrene foam 聚苯乙烯泡沫, Instrument type 仪器型号: Roaches Q-Max, Test condition 试验条件: 20.1°C, 65.2%, Hot plate temperature 热板温度: 35.0°C, Cold plate temperature 冷板温度: 20.0°C)

Requirement 要求

1# 0.287  
2# 0.290  
3# 0.285  
4# 0.279  
5# 0.284  
Average 平均值 0.28

≥0.15  
(GB/T 35263-2017)

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#### 注意事项

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3. 对委托送检结果有异议的，应于报告书送达之日起十五日内提出。
4. 检测结果仅对所检样品有效。
5. 未取得资质认定的项目，仅作为科研、教学或内部质量控制之用。
6. 报告书涂改无效。
7. 客户提供的信息（包括样品信息），本公司/中心不对其真实性负责。
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No: 240044714

Issue Date 签发日期: 2024-03-12

Applicant: INNOTIER Limited  
委托单位: 研路天科技有限公司  
Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United Kingdom  
地址: 英國倫敦沙夫茨伯里大街62號阿斯托利亞樓2層

Information confirmed by applicant 客户认定信息:

INNOTIER 研路天抗菌无痕内裤 6条, 底裆面料 100cm×100cm

Brand 商标: 研路天

Manufacturer 生产单位: 广州市凯权服饰有限公司

Basis of judgement 判定依据:

GB/T 21655.2-2019 <Textiles—Evaluation of absorption and quick-dring—Part 2:Method for moisture management tests> 《纺织品 吸湿速干性的评定 第2部分: 动态水分传递法》

Date Received/Date Test Started: 2024-03-06

样品受理/测试开始日期: 2024-03-06

Conclusion 结论:

Absorption and sweat releasing property before washing[Lining shell fabric]

洗前吸湿排汗性[底裆面料布料]

Note: "M"—Meet the standard's requirement "F"—Fail to meet the standard's requirement  
"---"—No comment

备注: "M"—符合标准要求 "F"—不符合标准要求  
"---"—此项目不判定

Remark:

All the tested items are tested under the standard condition (except for indication).  
本报告中检验检测项目均在相应标准规定的环境条件下进行(有注明的除外)。

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The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P. R. China.  
本报告检验检测地址为广州市番禺区珠江路1号。

Approved By(签发):

赖红敏 工程师

HongMin Lai Engineer

Hongmin Lai



# Test Report

No: 240044714





# Test Report

No: 240044714



# Test Report

No: 240044714

Absorption and sweat releasing property before washing[Lining shell fabric]  
洗前吸湿排汗性[底裆面料布料]  
(GB/T 21655.2-2019)

M

Wetting time 浸湿时间:  
Penetration face 渗透面  
3.5s  
4 Grade 级  
Absorption rate 吸水速率:  
Penetration face 渗透面  
58.1%/s  
4 Grade 级  
One-way transport capability 单向传递指数:  
101.5  
3 Grade 级

Requirement 要求  
Wetting time 浸湿时间:

≤20.0s  
≥3 Grade 级  
Absorption rate 吸水速率:  
≥30.1%/s  
≥3 Grade 级  
One-way transport capability 单向传递指数:  
≥100.1  
≥3 Grade 级  
(GB/T 21655.2-2019)

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No: 240044712

Issue Date 签发日期: 2024-03-11

Applicant: INNOTIER Limited  
委托单位: 研路天科技有限公司  
Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United Kingdom  
地址: 英國倫敦沙夫茨伯里大街62號阿斯托利亞樓2層

Information confirmed by applicant 客户认定信息:

INNOTIER 研路天抗菌无痕内裤 6条, 底裆面料 100cm×100cm

Brand 商标: 研路天

Manufacturer 生产单位: 广州市凯权服饰有限公司

Basis of judgement 判定依据:

Date Received/Date Test Started: 2024-03-06

样品受理/测试开始日期: 2024-03-06

Conclusion 结论:

Air permeability[Lining shell fabric]

透气性[底裆面料布料]

Note: "M"-Meet the standard's requirement "F"-Fail to meet the standard's requirement

"---"-No comment

备注: "M"-符合标准要求 "F"-不符合标准要求

"---"-此项目不判定

Remark:

All the tested items are tested under the standard condition (except for indication).

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The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P. R. China.

本报告检验检测地址为广州市番禺区珠江路1号。

Approved By(签发):

赖红敏 工程师

HongMin Lai Engineer

Hongmin Lai



# Test Report

No: 240044712



# Test Report

No: 240044712



# Test Report

No: 240044712

Air permeability(mm/s)[Lining shell fabric] ---  
透气性(mm/s)[底裆面料布料]

(GB/T 5453-1997, Pressure drop 压降: 100Pa, Test area 试验面积: 20cm, □ Face up  
正面朝上)

216 (CV 变异系数: 9.2%)

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#### 注意事项

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# Test Report



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No: 240036060

Issue Date 签发日期: 2024-02-23

Applicant: INNOTIER Limited

委托单位: 研路天科技有限公司

Address: 2nd Floor, Astoria House, 62 Shaftesbury Avenue, London, England W1D 6LT, United

地址: Kingdom

英國倫敦沙夫茨伯里大街62號阿斯托利亞樓2層

Information confirmed by applicant 客户认定信息:

Antiviral Underwear 专利黑科技抗菌环保内裤

Quantity 数量: 6 pieces 6条

Fabric 面料

Quantity 数量: 2 pieces 2块100cm×100cm

Manufacturer 生产单位: GuangZhou JF Gloves & Garment Accessories Co., Ltd.

广州市凯权服饰有限公司

Basis of judgement 判定依据:

FZ/T 73024-2014 <Knitted underwear with chemical fibres> 《化纤针织内衣》, GB 18401-2010 <National general safety technical code for textile products> 《国家纺织产品基本安全技术规范》, GB/T 29862-2013 <Textiles—Identification of fiber content> 《纺织品 纤维含量的标识》, T/GDBX 056-2022 <Antibacterial textiles> 《抗菌纺织品》

Date Received/Date Test Started: 2024-02-04

样品受理/测试开始日期: 2024-02-04

Conclusion 结论:

The testing results conform with the quality requirements for qualified product of standard FZ/T 73024-2014.

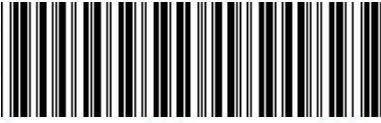
样品所检项目符合FZ/T 73024-2014标准合格品要求。

Dimensional stability to washing[Finished product: light yellow M underwear]

水洗尺寸变化率[成品浅黄色内裤]



# Test Report



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No: 240036060

Issue Date 签发日期: 2024-02-23

Pilling[Light yellow underwear shell fabric] 起球[浅黄色内裤面料布料]	M
Fibre composition[Light yellow underwear lining fabric] 纤维含量[浅黄色内裤底裆布料]	---
Fibre composition[Light yellow underwear shell fabric] 纤维含量[浅黄色内裤面料布料]	---
pH value[Light yellow underwear lining fabric] pH值[浅黄色内裤底裆布料]	M
pH value[Light yellow underwear shell fabric] pH值[浅黄色内裤面料布料]	M
Formaldehyde content[Finished product: light yellow underwear including print] 甲醛含量[成品浅黄色内裤含印花部位]	M
Determination of odours[Finished product: light yellow underwear] 异味[成品浅黄色内裤]	M
Colour fastness to washing with soap or soap and soda[Finished product: pink underwear shell] 耐皂洗色牢度[成品粉色内裤面料]	M
Colour fastness to perspiration[Finished product: pink underwear shell] 耐汗渍色牢度[成品粉色内裤面料]	M
Colour fastness to water[Finished product: pink underwear shell] 耐水色牢度[成品粉色内裤面料]	M
Colour fastness to dry rubbing[Finished product: pink underwear shell] 耐干摩擦色牢度[成品粉色内裤面料]	M
Colour fastness to wet rubbing[Finished product: pink underwear shell] 耐湿摩擦色牢度[成品粉色内裤面料]	M

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No: 240036060

Issue Date 签发日期: 2024-02-23

Colour fastness to washing with soap or soap and soda[Finished M  
product: purple underwear shell]

耐皂洗色牢度[成品灰紫色内裤面料]

Colour fastness to perspiration[Finished product: purple M  
underwear shell]

耐汗渍色牢度[成品灰紫色内裤面料]

Colour fastness to water[Finished product: purple underwear M  
shell]

耐水色牢度[成品灰紫色内裤面料]

Colour fastness to dry rubbing[Finished product: purple M  
underwear shell]

耐干摩擦色牢度[成品灰紫色内裤面料]

Colour fastness to wet rubbing[Finished product: purple M  
underwear shell]

耐湿摩擦色牢度[成品灰紫色内裤面料]

Colour fastness to washing with soap or soap and soda[Finished M  
product: green underwear shell]

耐皂洗色牢度[成品绿色内裤面料]

Colour fastness to perspiration[Finished product: green M  
underwear shell]

耐汗渍色牢度[成品绿色内裤面料]

Colour fastness to water[Finished product: green underwear M  
shell]

耐水色牢度[成品绿色内裤面料]

Colour fastness to dry rubbing[Finished product: green M  
underwear shell]

耐干摩擦色牢度[成品绿色内裤面料]

Colour fastness to wet rubbing[Finished product: green M  
underwear shell]

耐湿摩擦色牢度[成品绿色内裤面料]

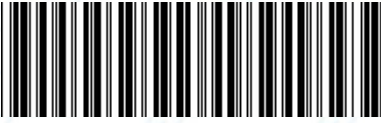
Colour fastness to washing with soap or soap and soda[Finished M  
product: light yellow underwear shell]

耐皂洗色牢度[成品浅黄色内裤面料]

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No: 240036060

Issue Date 签发日期: 2024-02-23

Colour fastness to perspiration[Finished product: light yellow M  
underwear shell]

耐汗渍色牢度[成品浅黄色内裤面料]

Colour fastness to water[Finished product: light yellow M  
underwear shell]

耐水色牢度[成品浅黄色内裤面料]

Colour fastness to dry rubbing[Finished product: light yellow M  
underwear shell]

耐干摩擦色牢度[成品浅黄色内裤面料]

Colour fastness to wet rubbing[Finished product: light yellow M  
underwear shell]

耐湿摩擦色牢度[成品浅黄色内裤面料]

Colour fastness to washing with soap or soap and soda[Finished M  
product: fleshcolor underwear shell]

耐皂洗色牢度[成品肉色内裤面料]

Colour fastness to perspiration[Finished product: fleshcolor M  
underwear shell]

耐汗渍色牢度[成品肉色内裤面料]

Colour fastness to water[Finished product: fleshcolor M  
shell]

耐水色牢度[成品肉色内裤面料]

Colour fastness to dry rubbing[Finished product: fleshcolor M  
underwear shell]

耐干摩擦色牢度[成品肉色内裤面料]

Colour fastness to wet rubbing[Finished product: fleshcolor M  
underwear shell]

耐湿摩擦色牢度[成品肉色内裤面料]

Appearance quality [piece: light yellow underwear] ---

外观质量[1条浅黄色内裤]

Banned azo colourant [Light yellow underwear lining fabric] M

可分解致癌芳香胺染料[浅黄色内裤底裆布料]



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Issue Date 签发日期: 2024-02-23

Banned azo colourants[Finished product: light yellow underwear M shell including print]

可分解致癌芳香胺染料[成品浅黄色内裤面料含印花部位]

Note: "M"-Meet the standard's requirement "F"-Fail to meet the standard's requirement  
"---"-No comment

备注: "M" -符合标准要求 "F" -不符合标准要求  
"---" -此项目不判定

Remark:

Qualified product (样品按合格品判定)

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The experiment was carried out at No.1, Zhujiang Road, Panyu District, Guangzhou, Guangdong, P. R. China.

本报告检验检测地址为广州市番禺区珠江路1号。

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# Test Report

No: 240036060



# Test Report

No: 240036060

Dimensional stability to washing(%) [Finished product: light yellow underwear] M

水洗尺寸变化率(%) [成品浅黄色内裤]

(GB/T 8629-2001, Type A washing machine A型洗衣机, Procedure 程序: Simulated hand washing 仿手洗, Line dry 悬挂晾干)

Length 直向 +0.9  
Width 横向 -1.0

Requirement 要求  
Length 直向  $\geq -7.0$   
Width 横向 No requirement for elastic products 弹力产品不考核  
(FZ/T 73024-2014)

Remark注: (-) means shrinkage and (+) means extension - 表示收缩 + 表示伸长

Pilling(Grade) [Light yellow underwear shell fabric] M

起球(级) [浅黄色内裤面料布料]

(GB/T 4802.1-2008, Circular locus method 圆轨迹法, Pilling 起球 600 cycles 600次, Pressure 压力: 780 cN)

4-5

Requirement 要求  
 $\geq 2-3$   
(FZ/T 73024-2014)

Fibre composition(%) [Light yellow underwear lining fabric] ---

纤维含量(%) [浅黄色内裤底裆布料]

(FZ/T 01057.1-2007, FZ/T 01057.2-2007, FZ/T 01057.3-2007, FZ/T 01057.4-2007, GB/T 38015-2019)

(Integrate with conventional moisture regain 结合公定回潮率含量):

Polyamide 锦纶 52.2  
Polyester 聚酯纤维 28.9  
Elastane 氨纶 18.9

Fibre composition(%) [Light yellow underwear shell fabric] ---

纤维含量(%) [浅黄色内裤面料布料]

(FZ/T 01057.1-2007, FZ/T 01057.2-2007, FZ/T 01057.3-2007, FZ/T 01057.4-2007, GB/T 38015-2019)

(Integrate with conventional moisture regain 结合公定回潮率含量):

Polyamide 锦纶 51.1  
Elastane 氨纶 18.9

pH value [Light yellow underwear lining fabric] M

pH值 [浅黄色内裤底裆布料]

(GB/T 7573-2009, 0.1mol/L KCl extracting solution 0.1mol/L KCl 溶液萃取)

6.3 ..... Requirement 要求  
4.0~7.5 Class A A类  
(GB 18401-2010)

pH value [Light yellow underwear shell fabric] M

pH值 [浅黄色内裤面料布料]

(GB/T 7573-2009, 0.1mol/L KCl extracting solution 0.1mol/L KCl 溶液萃取)

6.8 ..... Requirement 要求  
4.0~7.5 Class A A类  
(GB 18401-2010)



# Test Report

No: 240036060

Formaldehyde content(mg/kg)[Finished product: light yellow underwear including print] M

甲醛含量(mg/kg)[成品浅黄色内裤含印花部位]

(GB/T 2912.1-2009, Water extraction method 水萃取法)

ND

Requirement 要求  
≤20 Class A A类

(GB 18401-2010)

(Detection limit 检出限: 20)

Remark注: "ND" means less than the detection limit. 结果未检出表示含量低于检出限。

Determination of odours[Finished product: light yellow underwear] M

异味[成品浅黄色内裤]

(GB 18401-2010 6.7)

Requirement 要求

No abnormal odour 无异味

(GB 18401-2010)

No abnormal odour 无异味

Colour fastness to washing with soap or soap and soda(Grade)[Finished product: pink underwear shell] M

耐皂洗色牢度(级)[成品粉色内裤面料]

(GB/T 3921-2008, A(1), 40°C)

Colour change 变色 4

Colour staining 沾色

- Acetate 醋纤 -----4-5

- Cotton 棉 -----4-5

- Polyamide 锦纶 -----4-5

- Polyester 涤纶 -----4-5

- Acrylic 腈纶 -----4-5

- Wool 羊毛 -----4-5

Requirement 要求

≥3

≥3

(FZ/T 73024-2014)

Colour fastness to perspiration(Grade)[Finished product: pink underwear shell] M

耐汗渍色牢度(级)[成品粉色内裤面料]

(GB/T 3922-2013)

Colour change 变色 4

Colour staining 沾色

- Acetate 醋纤 -----4-5

- Cotton 棉 -----4-5

- Polyamide 锦纶 -----4-5

- Polyester 涤纶 -----4-5

- Acrylic 腈纶 -----4-5

- Wool 羊毛 -----4-5

Alkaline 碱

4

Requirement 要求

≥3-4

≥3-4

(GB 18401-2010)

Colour fastness to water(Grade)[Finished product: pink underwear shell] M

耐水色牢度(级)[成品粉色内裤面料]

(GB/T 5713-2013)

Colour change 变色 4

Colour staining 沾色

- Acetate 醋纤 -----4-5

- Cotton 棉 -----4-5

- Polyamide 锦纶 -----4-5

- Polyester 涤纶 -----4-5

Requirement 要求

≥3-4

≥3-4

(GB 18401-2010)



# Test Report

No: 240036060

Colour fastness to dry rubbing(Grade)[Finished product: pink underwear shell] M  
耐干摩擦色牢度(级)[成品粉色内裤面料] ]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥4  
(GB 18401-2010)

Colour fastness to wet rubbing(Grade)[Finished product: pink underwear shell] M  
耐湿摩擦色牢度(级)[成品粉色内裤面料] ]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥3  
(FZ/T 73024-2014)

Colour fastness to washing with soap or soap and soda(Grade)[Finished product: purple underwear shell] M  
耐皂洗色牢度(级)[成品灰紫色内裤面料] ]  
(GB/T 3921-2008, A(1), 40°C)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Requirement 要求  
≥3  
≥3  
(FZ/T 73024-2014)

Colour fastness to perspiration(Grade)[Finished product: purple underwear shell] M  
耐汗渍色牢度(级)[成品灰紫色内裤面料] ]  
(GB/T 3922-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 ----- 4-5  
- Polyamide 锦纶 ----- 4-5  
- Polyester 涤纶 ----- 4-5  
- Acrylic 腈纶 ----- 4-5  
- Wool 羊毛 ----- 4-5

Alkaline 碱  
4

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)

Colour fastness to water(Grade)[Finished product: purple underwear shell] M  
耐水色牢度(级)[成品灰紫色内裤面料] ]  
(GB/T 5713-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)





# Test Report

No: 240036060

Colour fastness to dry rubbing(Grade)[Finished product: purple underwear shell]  
耐干摩擦色牢度(级)[成品灰紫色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥4  
(GB 18401-2010)

Colour fastness to wet rubbing(Grade)[Finished product: purple underwear shell]  
耐湿摩擦色牢度(级)[成品灰紫色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥3  
(FZ/T 73024-2014)

Colour fastness to washing with soap or soap and soda(Grade)[Finished product: green underwear shell]  
耐皂洗色牢度(级)[成品绿色内裤面料]  
(GB/T 3921-2008, A(1), 40°C)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 ----- 4-5  
- Polyamide 锦纶 ----- 4-5  
- Polyester 涤纶 ----- 4-5  
- Acrylic 腈纶 ----- 4-5  
- Wool 羊毛 ----- 4-5

Requirement 要求  
≥3  
≥3  
(FZ/T 73024-2014)

Colour fastness to perspiration(Grade)[Finished product: green underwear shell]  
耐汗渍色牢度(级)[成品绿色内裤面料]  
(GB/T 3922-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 ----- 4-5  
- Polyamide 锦纶 ----- 4-5  
- Polyester 涤纶 ----- 4-5  
- Acrylic 腈纶 ----- 4-5  
- Wool 羊毛 ----- 4-5

Alkaline 碱  
4

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)

Colour fastness to water(Grade)[Finished product: green underwear shell]  
耐水色牢度(级)[成品绿色内裤面料]  
(GB/T 5713-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 ----- 4-5  
- Polyamide 锦纶 ----- 4-5  
- Polyester 涤纶 ----- 4-5

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)



# Test Report

No: 240036060

Colour fastness to dry rubbing(Grade)[Finished product: green underwear shell] M  
耐干摩擦色牢度(级)[成品绿色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥4  
(GB 18401-2010)

Colour fastness to wet rubbing(Grade)[Finished product: green underwear shell] M  
耐湿摩擦色牢度(级)[成品绿色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥3  
(FZ/T 73024-2014)

Colour fastness to washing with soap or soap and soda(Grade)[Finished product: light yellow underwear shell] M  
耐皂洗色牢度(级)[成品浅黄色内裤面料]  
(GB/T 3921-2008, A(1), 40°C)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Requirement 要求  
≥3  
≥3  
(FZ/T 73024-2014)

Colour fastness to perspiration(Grade)[Finished product: light yellow underwear shell] M  
耐汗渍色牢度(级)[成品浅黄色内裤面料]  
(GB/T 3922-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 ----- 4-5  
- Polyamide 锦纶 ----- 4-5  
- Polyester 涤纶 ----- 4-5  
- Acrylic 腈纶 ----- 4-5  
- Wool 羊毛 ----- 4-5

Alkaline 碱  
4

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)

Colour fastness to water(Grade)[Finished product: light yellow underwear shell] M  
耐水色牢度(级)[成品浅黄色内裤面料]  
(GB/T 5713-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)



# Test Report

No: 240036060

Colour fastness to dry rubbing(Grade)[Finished product: light yellow underwear shell] M  
耐干摩擦色牢度(级)[成品浅黄色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥4  
(GB 18401-2010)

Colour fastness to wet rubbing(Grade)[Finished product: light yellow underwear shell] M  
耐湿摩擦色牢度(级)[成品浅黄色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
≥3  
(FZ/T 73024-2014)

Colour fastness to washing with soap or soap and soda(Grade)[Finished product: fleshcolor underwear shell] M  
耐皂洗色牢度(级)[成品肉色内裤面料]  
(GB/T 3921-2008, A(1), 40°C)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Requirement 要求  
≥3  
≥3  
(FZ/T 73024-2014)

Colour fastness to perspiration(Grade)[Finished product: fleshcolor underwear shell] M  
耐汗渍色牢度(级)[成品肉色内裤面料]  
(GB/T 3922-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Alkaline 碱 4  
Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)

Colour fastness to water(Grade)[Finished product: fleshcolor underwear shell] M  
耐水色牢度(级)[成品肉色内裤面料]  
(GB/T 5713-2013)

Colour change 变色 4  
Colour staining 沾色  
- Acetate 醋纤 ----- 4-5  
- Cotton 棉 4-5  
- Polyamide 锦纶 4-5  
- Polyester 涤纶 4-5  
- Acrylic 腈纶 4-5  
- Wool 羊毛 4-5

Requirement 要求  
≥3-4  
≥3-4  
(GB 18401-2010)



# Test Report

No: 240036060

Colour fastness to dry rubbing(Grade)[Finished product: fleshcolor underwear shell] M  
耐干摩擦色牢度(级)[成品肉色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
 $\geq 4$   
(GB 18401-2010)

Colour fastness to wet rubbing(Grade)[Finished product: fleshcolor underwear shell] M  
耐湿摩擦色牢度(级)[成品肉色内裤面料]  
(GB/T 3920-2008)

4-5

Requirement 要求  
 $\geq 4$   
(FZ/T 73024-2014)

Appearance quality[1 piece : light yellow underwear]  
外观质量[1条浅黄色内裤]  
(GB/T 8878-2014 5.2)

---

Pass (dimension is not tested)  
符合要求 (规格未检测)

Requirement 要求  
According to the clause 4.4 of the  
product standard 按标准4.4条要求  
(GB/T 73024-2014)

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# Test Report

No: 240036060

Banned azo colourants[Light yellow underwear lining fabric] 可分解致癌芳香胺染料[浅黄色内裤底裆布料]

Test method:

测试方法 GB/T 17592-2011 General pretreatment 常规前处理方法

Forbidden amine	禁用芳香胺名称	CAS No. 化学文摘编号	Requirement 标准要求 (mg/kg)	Result 检验检测结果 (mg/kg)
4-Aminobiphenyl	4-氨基联苯	92-67-1	≤20	ND
Benzidine	联苯胺	92-87-5	≤20	ND
4-Chloro-o-toluidine	4-氯-邻甲苯胺	95-49-2	≤20	ND
2-Naphthylamine	2-萘胺	131-59-1	≤20	ND
o-Aminoazobenzene	邻氨基偶氮苯	97-56-3	≤20	ND
5-Nitro-o-toluidine	5-硝基-邻甲苯胺	95-55-8	≤20	ND
4-Chloroaniline	对氯苯胺	106-47-8	≤20	ND
2,4-Diaminobenzene	2,4-二氨基苯胺	115-05-4	≤20	ND
4,4'-Diaminodiphenylmethane	4,4'-二氨基二苯甲烷	101-77-9	≤20	ND
3,3'-Dichlorobenzidine	3,3'-二氯联苯胺	91-94-1	≤20	ND
3,3'-Dimethoxybenzidine	3,3'-二甲氧基联苯胺	119-90-4	≤20	ND
3,3'-Dimethylbenzidine	3,3'-二甲基联苯胺	119-93-7	≤20	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	3,3'-二甲基-4,4'-二氨基二苯甲烷	838-88-0	≤20	ND
p-Cresidine	2-甲氧基-5-甲基苯胺	120-71-8	≤20	ND
4,4'-Methylene-bis-(2-chloroaniline)	4,4'-亚甲基二-(2-氯苯胺)	101-14-4	≤20	ND
4,4'-Oxydianiline	4,4'-二氨基二苯醚	101-80-4	≤20	ND
4,4'-Thiodianiline	4,4'-二氨基二苯硫醚	139-65-1	≤20	ND
o-Toluidine	邻甲苯胺	95-53-4	≤20	ND
2,4-Toluidinediamine	2,4-二氨基苯胺	95-80-7	≤20	ND
2,4,5-Triaminobenzene	2,4,5-三氨基苯胺	137-17-7	≤20	ND
o-Aminobiphenyl	邻氨基联苯	90-04-0	≤20	ND
2,4-Xylydiamine	2,4-二甲基苯胺	95-68-1	≤20	ND
2,6-Xylydiamine	2,6-二甲基苯胺	87-62-7	≤20	ND
4-Aminoazobenzene	4-氨基偶氮苯	60-09-3	≤20	ND

"ND" means less than the detection limit of 5mg/kg 结果未检出表示含量低于检出限:5mg/kg

Rating according to GB 18401-2010. 该项目按照GB 18401-2010 标准判定。

Overall rating 本项判定

Pass 符合



# Test Report

No: 240036060

 Banned azo colourants[Finished product: light yellow underwear shell including print]  
 可分解致癌芳香胺染料[成品浅黄色内裤面料含印花部位]

Test method:

测试方法 GB/T 17592-2011 General pretreatment 常规前处理方法

Forbidden amine	禁用芳香胺名称	CAS No. 化学文摘编号	Requirement 标准要求 (mg/kg)	Result 检验检测结果 (mg/kg)
4-Aminobiphenyl	4-氨基联苯	92-67-1	≤20	ND
Benzidine	联苯胺	92-87-5	≤20	ND
4-Chloro-o-toluidine	4-氯-邻甲苯胺	95-69-2	≤20	ND
2-Naphthylamine	2-萘胺	115-59-1	≤20	ND
o-Aminoazobenzene	邻氨基偶氮苯	97-56-3	≤20	ND
5-Nitro-o-toluidine	5-硝基-邻甲苯胺	95-75-8	≤20	ND
4-Chloroaniline	对氯苯胺	106-47-8	≤20	ND
2,4-Diaminobenzene	2,4-二氨基苯胺	115-05-4	≤20	ND
4,4'-Diaminodiphenylmethane	4,4'-二氨基二苯甲烷	101-77-9	≤20	ND
3,3'-Dichlorobenzidine	3,3'-二氯联苯胺	91-94-1	≤20	ND
3,3'-Dimethoxybenzidine	3,3'-二甲氧基联苯胺	119-90-4	≤20	ND
3,3'-Dimethylbenzidine	3,3'-二甲基联苯胺	119-93-7	≤20	ND
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	3,3'-二甲基-4,4'-二氨基二苯甲烷	838-88-0	≤20	ND
p-Cresidine	2-甲氧基-5-甲基苯胺	120-71-8	≤20	ND
4,4'-Methylene-bis-(2-chloroaniline)	4,4'-亚甲基二-(2-氯苯胺)	101-14-4	≤20	ND
4,4'-Oxydianiline	4,4'-二氨基二苯醚	101-80-4	≤20	ND
4,4'-Thiodianiline	4,4'-二氨基二苯硫醚	139-65-1	≤20	ND
o-Toluidine	邻甲苯胺	95-53-4	≤20	ND
2,4-Toluidinediamine	2,4-二氨基甲苯胺	95-80-7	≤20	ND
2,4,5-Triaminobenzene	2,4,5-三氨基苯胺	137-17-7	≤20	ND
o-Aminobiphenyl	邻氨基联苯	90-04-0	≤20	ND
2,4-Xylylenediamine	2,4-二甲基苯胺	95-68-1	≤20	ND
2,6-Xylylenediamine	2,6-二甲基苯胺	87-62-7	≤20	ND
4-Aminoazobenzene	4-氨基偶氮苯	60-09-3	≤20	ND

"ND" means less than the detection limit of 5mg/kg 结果未检出表示含量低于检出限:5mg/kg

Rating according to GB 18401-2010. 该项目按照GB 18401-2010 标准判定。

Overall rating 本项判定 Pass 符合

本报告结束(End of Report)



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4. The result is only valid for the tested sample.
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INNOTIER LIMITED

2ND FLOOR, ASTORIA HOUSE, 62 SHAFTESBURY AVENUE, ENGLAND, LONDON, W1D 6LT, United Kingdom

The following sample(s) was/were submitted and identified on behalf of the client as:

Sample Description : ANTIMICROBIAL UNDERWEAR

Style No. : GP-M1

Retest : No

Sample Receiving Date : Apr 03, 2024

Testing Period : Apr 08, 2024 - Apr 15, 2024

Test Result(s) : Unless otherwise stated the results shown in this test report refer only to the sample(s) tested, for further details, please refer to the following page(s).

Test Performed : Selected test(s) as requested by applicant

Signed for and on behalf of  
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch



King Cho (Section Head)



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The below test was conducted in SGS Shanghai Lab.

Test Result

**Liquid Moisture Management Properties of Textile Fabrics**  
(AATCC TM 195-2011e2(2017)e4)

(A)

- 1 Test Equipment: Moisture Management Tester (MMT)
- 2 Orientation of fabric: Fabric is put between two layer of sensors (Top and bottom layer of sensor) with fabric face side facing downward.
- 3 Applied solution: 0.2 mL of salt solution is applied to the fabric back side (skin contact side of fabric)

Test sample: As Received

Results:

Liquid moisture management indices	Average	Standard deviation	Grade	Client's Requirement
Top wetting time, WT <sub>T</sub> (second)	9.0418	0.3778	3	/
Bottom wetting time, WT <sub>B</sub> (second)	9.3416	0.3707	3	/
Top absorption rate, AR <sub>T</sub> (%/second)	72.6793	8.6753	4	/
Bottom absorption rate, AR <sub>B</sub> (%/second)	104.0525	4.9286	5	/
Top max wetting radius, MWR <sub>T</sub> (mm)	20	0	4	/
Bottom max wetting radius, MWR <sub>B</sub> (mm)	20	0	4	/
Top spreading speed, SS <sub>T</sub> (mm/second)	2.1655	0.1661	3	/
Bottom spreading speed, SS <sub>B</sub> (mm/second)	2.1838	0.1893	3	/
One way transport capability, R (%)	15.1985	24.3055	2	/
Overall moisture management capacity, OMMC	0.4209	0.0283	3	/

Note: Top is skin contact side of fabric; Bottom is outer side of fabric.

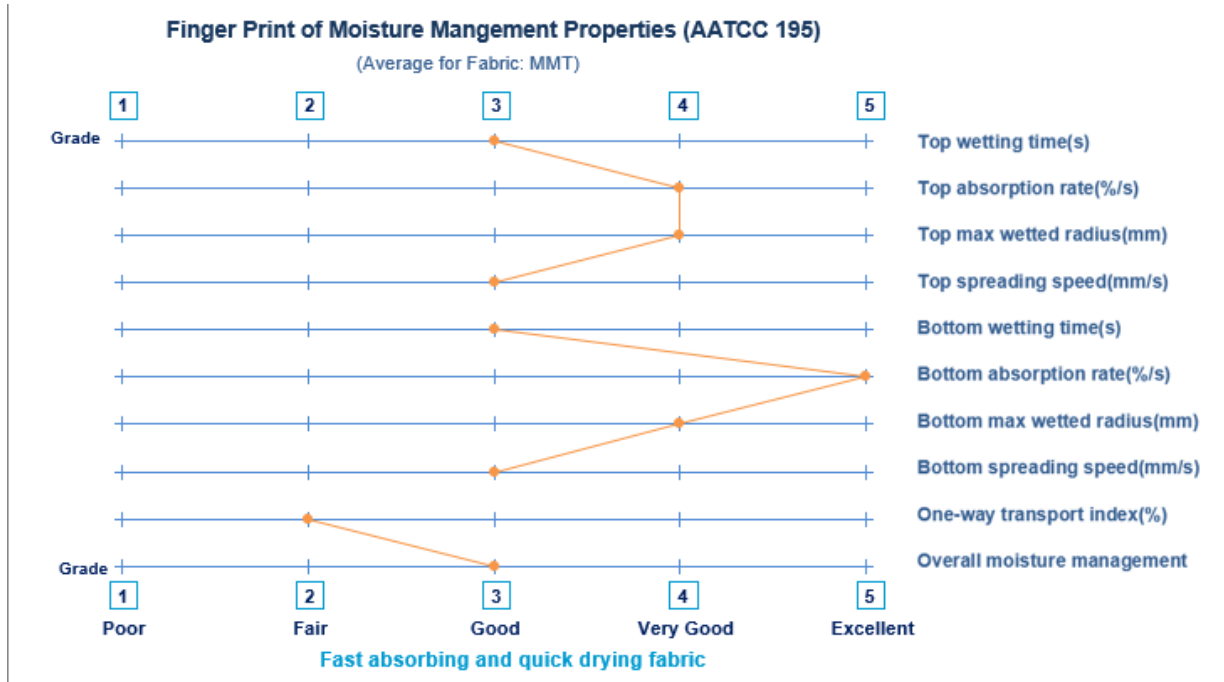


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**Fabric category** (with reference to MMT operation manual):

Test sample is classified as a Fast absorbing and quick drying fabric



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(B)

- 1 Test Equipment: Moisture Management Tester (MMT)
- 2 Orientation of fabric: Fabric is put between two layer of sensors (Top and bottom layer of sensor) with fabric face side facing downward.
- 3 Applied solution: 0.2 mL of salt solution is applied to the fabric back side (skin contact side of fabric)

Test sample: As Received

**Results:**

Liquid moisture management indices	Average	Standard deviation	Grade	Client's Requirement
Top wetting time, $WT_T$ (second)	3.3696	0.0661	4	/
Bottom wetting time, $WT_B$ (second)	3.4632	0.0661	4	/
Top absorption rate, $AR_T$ (%/second)	86.9359	3.3653	4	/
Bottom absorption rate, $AR_B$ (%/second)	96.1062	1.5533	4	/
Top max wetting radius, $MWR_T$ (mm)	28	2.7386	5	/
Bottom max wetting radius, $MWR_B$ (mm)	30	0	5	/
Top spreading speed, $SS_T$ (mm/second)	4.718	0.177	5	/
Bottom spreading speed, $SS_B$ (mm/second)	4.7023	0.0803	5	/
One way transport capability, R (%)	60.1847	21.7423	2	
Overall moisture management capacity, OMMC	0.6116	0.0245	4	

Note: Top is skin contact side of fabric; Bottom is outer side of fabric.

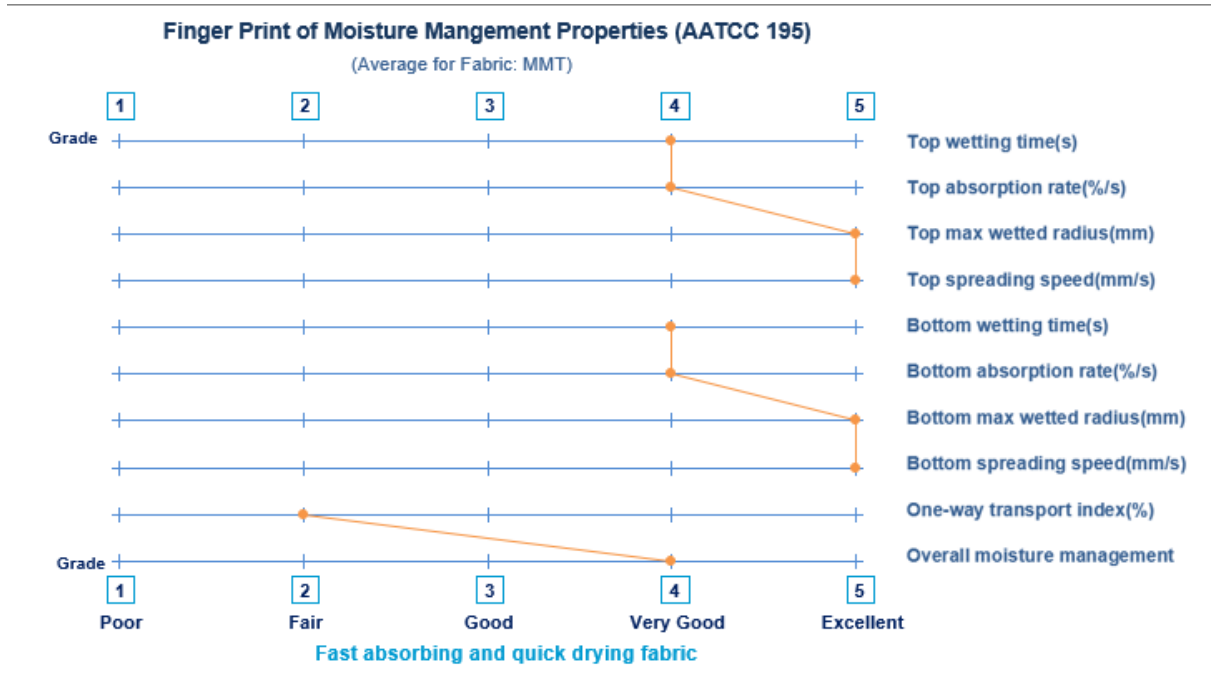


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**Fabric category** (with reference to MMT operation manual):

Test sample is classified as a Fast absorbing and quick drying fabric



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(C)

- 1 Test Equipment: Moisture Management Tester (MMT)
- 2 Orientation of fabric: Fabric is put between two layer of sensors (Top and bottom layer of sensor) with fabric face side facing downward.
- 3 Applied solution: 0.2 mL of salt solution is applied to the fabric back side (skin contact side of fabric)

Test sample: As Received

**Results:**

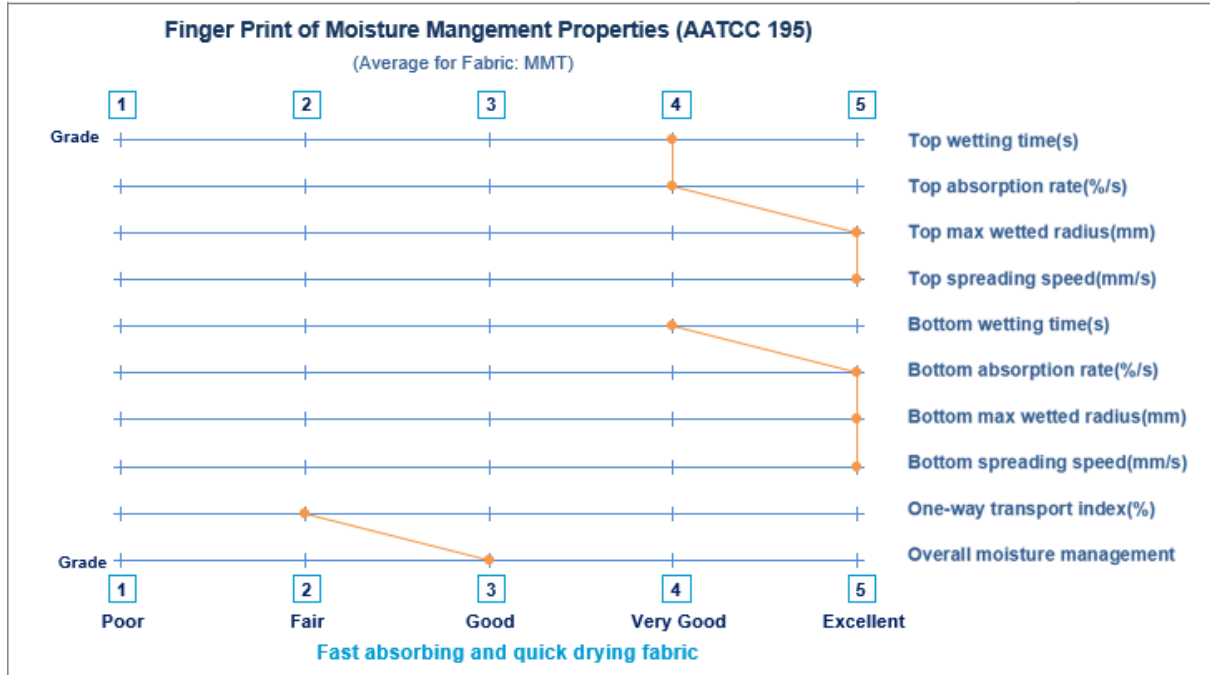
Liquid moisture management indices	Average	Standard deviation	Grade	Client's Requirement
Top wetting time, $WT_T$ (second)	3.4632	0.1478	4	/
Bottom wetting time, $WT_B$ (second)	3.6132	0.1937	4	/
Top absorption rate, $AR_T$ (%/second)	93.6114	5.6342	4	/
Bottom absorption rate, $AR_B$ (%/second)	102.5979	1.9729	5	/
Top max wetting radius, $MWR_T$ (mm)	25	0	5	/
Bottom max wetting radius, $MWR_B$ (mm)	26	2.2361	5	/
Top spreading speed, $SS_T$ (mm/second)	5.0422	0.5933	5	/
Bottom spreading speed, $SS_B$ (mm/second)	4.9624	0.6143	5	/
One way transport capability, R (%)	-0.1481	28.7337	2	
Overall moisture management capacity, OMMC	0.5554	0.0319	3	

Note: Top is skin contact side of fabric; Bottom is outer side of fabric.



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**Fabric category** (with reference to MMT operation manual):

Test sample is classified as a Fast absorbing and quick drying fabric

**Remarks:**

- (1) The Moisture Management Tester (MMT) distinguish the nature of fabrics (within seven major types of fabric categories) based on the following liquid moisture transfer properties measured.



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Fabric category	Character of liquid moisture transfer
Moisture management fabric	<ul style="list-style-type: none"> <li>- Medium to fast wetting</li> <li>- Medium to fast absorption</li> <li>- Large spread area at bottom surface</li> <li>- Fast spreading at bottom surface</li> <li>- Good to excellent one-way transport</li> </ul>
Fast absorbing and quick drying fabric	<ul style="list-style-type: none"> <li>- Medium to fast wetting</li> <li>- Medium to fast absorption</li> <li>- Large spreading area</li> <li>- Fast spreading</li> <li>- Poor one-way transport</li> </ul>
Fast absorbing and slow drying fabric	<ul style="list-style-type: none"> <li>- Medium to fast wetting</li> <li>- Medium to fast absorption</li> <li>- Small spreading area</li> <li>- Slow spreading</li> <li>- Poor one-way transport</li> </ul>
Slow absorbing and slow drying fabric	<ul style="list-style-type: none"> <li>- Slow absorption</li> <li>- Slow spreading</li> <li>- Poor one-way transport</li> </ul>
Water penetration fabric	<ul style="list-style-type: none"> <li>- Small spreading area</li> <li>- Excellent one-way transport</li> </ul>
Water repellent fabric	<ul style="list-style-type: none"> <li>- No wetting</li> <li>- No absorption</li> <li>- No spreading</li> <li>- Poor one-way transport without external forces</li> </ul>
Water proof fabric	<ul style="list-style-type: none"> <li>- Very slow absorption</li> <li>- Slow spreading</li> <li>- No one-way transport, no penetration</li> </ul>



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(2) Moisture management indices:

- 1 Wetting time top – the time period when the top surface of the specimen just starts to get wetted
- 2 Wetting time bottom – the time period when the bottom surface of the specimen just starts to get wetted
- 3 Top absorption rate – the average moisture absorption rate for top surface of the specimen during the rise of water content
- 4 Bottom absorption rate – the average moisture absorption rate for bottom surface of the specimen during the rise of water content
- 5 Top maximum wetted radius – maximum wetted radius at the top surface
- 6 Bottom maximum wetted radius – maximum wetted radius at the bottom surface
- 7 Top spreading speed – the accumulative spreading speed from the centre to the maximum wetted radius at the top surface
- 8 Bottom spreading speed – the accumulative spreading speed from the centre to the maximum wetted radius at the bottom surface
- 9 Accumulative one-way transport index – the difference of the accumulative moisture content between the two surfaces of the fabric in unit time
- 10 Overall moisture management capability (OMMC) – indicates the overall capability of the fabric to manage the transport of liquid moisture, which includes three aspects of performances:
  - a) Moisture absorption rate at the bottom surface
  - b) One-way liquid transport capacity
  - c) Moisture spreading speed at the bottom surface, which is represented by the maximum spreading speed



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### Sample Photo



\*\*\*End of Report\*\*\*



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