

三加一能量科技股份有限公司

FOUR ELEMENTS ENERGY BIOTECH. CO., LTD

By Mavis Chen

About us

We use elements to create functional yarns (IMD) that bring you anti-bacterial, regulate temperature, drive your body mechanism effortlessly, protect yourself against discomfort and more.

Our yarn can be customized to the developing your needs.



Major Wins



Why we want to do?

Nowadays people face increasing pressure due to exams, work, and illnesses. High pressure leads to symptoms such as disrupted sleep patterns, shoulder discomfort, and autonomic nervous system imbalance.



What we do?

We use different elements to create functional yarns (IMD) that bring you anti-bacterial, regulate temperature, drive your body mechanism effortlessly, protect yourself against discomfort and more.

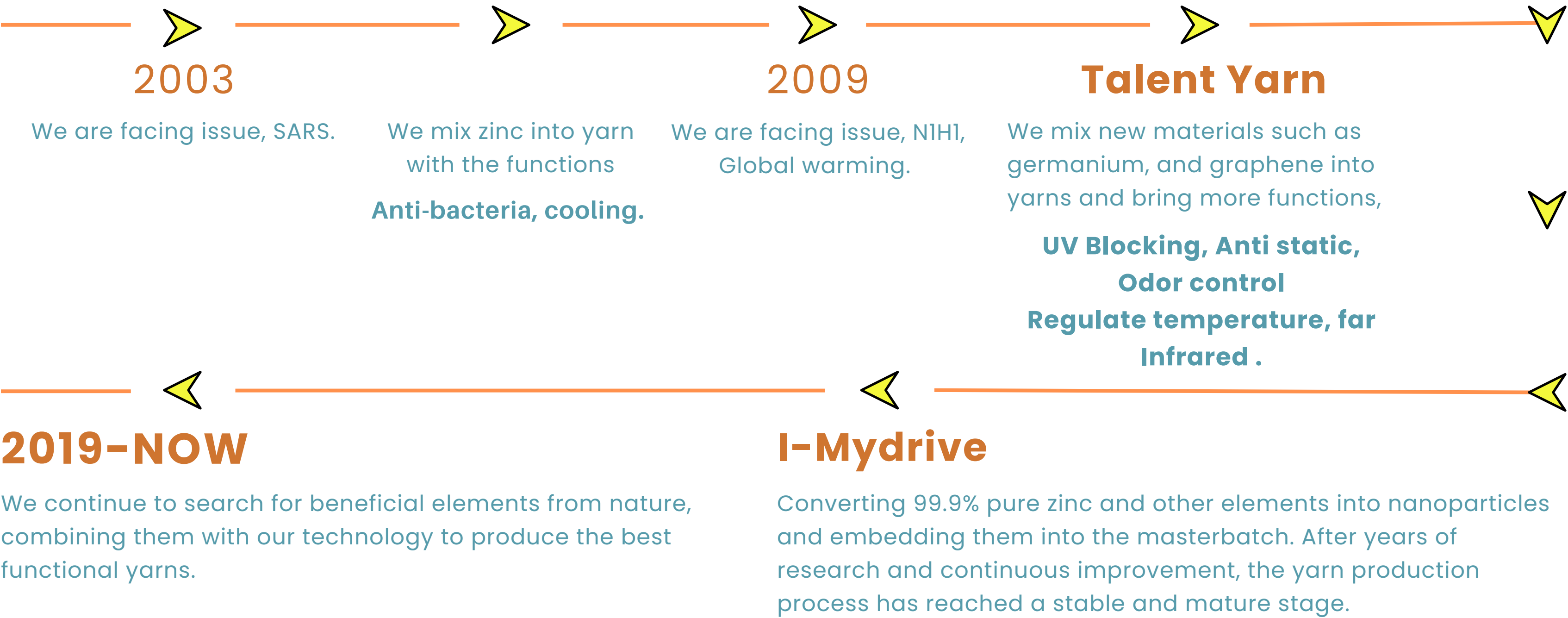


How to do?

Converting 99.9% pure zinc and other elements into nanoparticles (**LIQUID ZINC**) and embedding them into the masterbatch. The nanoparticles connect with the fibers to achieve functions and remain effective indefinitely.

FOUR ELEMENTS ENERGY BIOTECH. CO., LTD

Upgrade Talent Yarn to I Mydrive



A person with short brown hair, wearing a dark jacket and shorts, stands on a rocky mountain peak. They are holding a smartphone up to take a photo of a vast, hazy mountain range in the background. The scene is bathed in a soft, blue-tinted light, suggesting a misty or early morning atmosphere. The foreground shows the rough texture of the rocks and some sparse green vegetation.

Bringing everyone back to
nature. Organisms require
elements from nature to
balance the body and mind.



What you can do?

Everyone is focused on avoiding your environment and what about strengthening your immune system?

- Eat well
- Exercise
- Earthing
- Sleep well





What I My Drive can do?

IMD could be your shield.
Healthy body+ IMD = better life

- Antibacterial
- Odor control
- UV blocking
- Cooling sensation
- Retain warmth
- Far infrared
- Anti- static
- Stress relief

SPECIFICATION OF IMD



DTY POLYESTER/ POLYAMIND (NYLON)

- 50D/72F
- 75D/72F
- 100D/144F
- 150D/144F
- 70D/48F
- 70D/72F
- 140D/96F
- 140D/144F



I MY DRIVE



Talent Yarn®

微量元素啟動肌膚活力
波動能量活化粒線體
提升身體免疫力



抗菌



除臭



抗UV



冬暖



涼爽



遠紅外線



釋壓



抗靜電



血液循環

Talent Yarn®

ACHIE- VEMENT

FOUR ELEMENTS
ENERGY BIOTECH. CO.,
LTD

After years of research, our technology has become proficient in nano-sizing specific trace elements and implanting them into yarn fibers.



Value 3+1

Multiple

in one yarn- I My Drive

One yarn can bring antibacterial, odor control, UV blocking, cooling sensation or retain warmth, anti-static, release stress, FIR.

Tests Conducted (As Requested By The Applicant)

1 Antibacterial Activity Test (After 50 Washing)

As per applicant’s request with reference to AATCC test method 100-2012.

Prewash for 50cycles as per AATCC 135-2015, machine wash at **80°F**, normal cycle, tumble dry.
Test Organism : *Staphylococcus aureus* (ATCC 6538)

Sterilization Of Sample Before Test : Autoclave At 121°C, 15 Minutes
Neutralizing Solution : 0.85% Sodium Chloride Solution
Contact Time : 24 Hours
Incubation Temperature : 37°C
Incubation Period : 48 Hours
Agar Medium : Nutrient Agar

Tested Specimen : Submitted Sample (8 pieces of swatches with 4.8 cm in diameter)

Result :

Name Of Test Bacteria (Strain Number)	<i>Staphylococcus aureus</i> (ATCC 6538)
Initial count	1.61 X10 ⁵ CFU/ml
The number of bacteria recovered from the inoculated tested sample swatches immediately after inoculation ("0" contact time) (B)	1.40 X10 ⁵ CFU/Sample
The number of bacteria recovered from the inoculated tested sample swatches incubated over 24 hours contact period (A)	7.50 X10 ² CFU/Sample
Percent reduction of Bacteria (R)	99.46%

Calculation of percent reduction of Bacteria:
 $R = (B-A)/B \times 100\%$

Remark : CFU = Colony forming unit

End of Report

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Value

3+1



測試內容：

1. 消臭效能檢測-氨氣 (ISO 17299-2:2014, 檢知管法):

	結果 (µl/l)	
	試樣值 A	空白試樣值 B
1	5	83
2	5	83
3	5	83
	(A) 平均 = 5	(B) 平均 = 83
消臭效能(%)	94	

備註：消臭效能 = $(B-A) / B \times 100\%$
B = 未含待測物之空氣袋中的氨氣濃度平均值(µl/l)

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No: TXA2511 /2016 /SP

Date: Nov. 03, 2016

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Test Results:

2. Transmittance or Blocking of Erythemally Weighted Ultraviolet Radiation through Fabrics (AATCC 183-2010)

As received

	Dry evaluation	Wet evaluation
Ultraviolet Protection Factor (UPF) :	130	130
Standard Deviation :	0.38	2.21
Rated UPF :	50+	50+
Protection Category :	Excellent	Excellent
Percent Transmittance, T (UV-A) :	0.90	1.44
Percent Transmittance, T (UV-B) :	0.49	0.33
The Percent Blocking, UV-A :	99.10	98.56
The Percent Blocking, UV-B :	99.51	99.67

Test was conducted in wavelength range : 280 – 400 nm
Instrument : UV – Vis Spectrophotometer model

報告號碼：TWNC01241598



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No: TX60971A /2022 /LI

Date: June 23, 2022

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Four Elements Energy Biotechnology Co., Ltd.
2F-6, No. 150 Jilin Road, Taipei 10458, Taiwan

The following sample was submitted and identified by applicant as:

Sample Description	: One sample of I-Mydrive* knitted fabric
Color	: Light Blue
Fiber Content	: 100% Nylon
Applicant	: Four Elements Energy Biotechnology Co., Ltd.
Sample Receiving Date	: June 13, 2022
Test Performance Period	: June 13, 2022 to June 17, 2022
Test Performed	: Selected test(s) as requested by applicant.

Test Results:

Cool Feeling Textiles (FTTS-FA-019 - Version 3.0 Clause 3 & 4)

As received
Skin contact side(Back side)
Q-max(W/cm²) 0.195

Test Conditions: 1. Thermo Labo II B, TYPE : KES-F7
2. Room Temperature : 20±2℃, Humidity : 65±2%
3. Cool plate temperature: 25±0.1℃
Hot plate temperature: 35±0.1℃
4. Test as received sample as per client's request

Remark: Performance specification

Cool Feeling Textiles	
Knitted	≥ 0.130
Woven	≥ 0.170

Remark: Test results have been taken from report number No: TX60971 /2022 /LI, Date: June 17, 2022

*** End of Report ***

Signed for and on behalf of
SGS Taiwan Ltd.

Ronnie Chang
Chang Chia Hao, Ronnie
Technical Manager



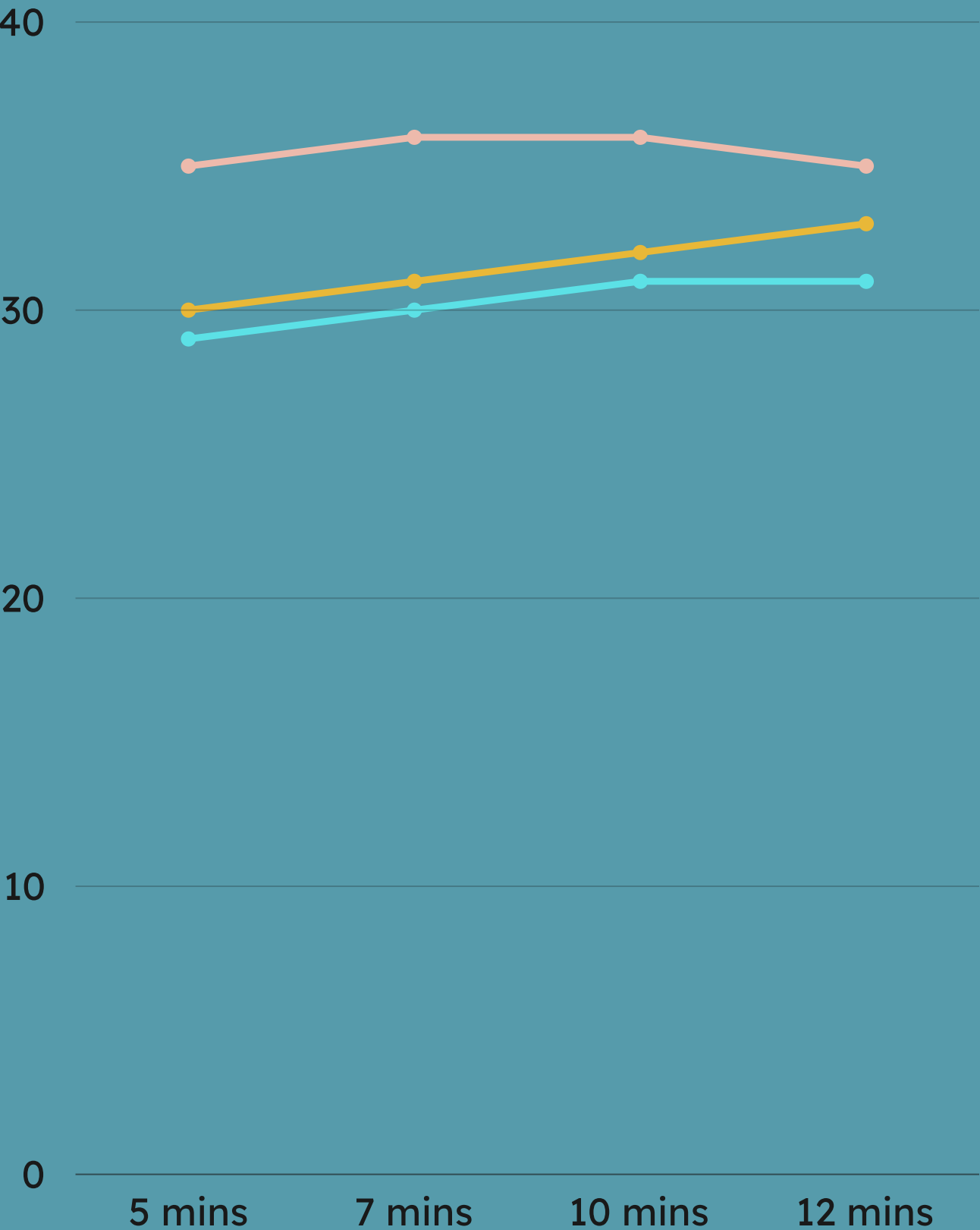
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Continuous cooling sensation experiments

ASTM D7024-04

This test method covers the determination of the overall thermal transmission coefficient due to conduction for dry specimens of textile fabrics, battings, and other materials and the determination of the temperature regulating factor (TRF) defined below.

- The yellow line represents body temperature.
- The gray line represents the temperature after wearing fabric woven with another brand's cooling yarn.
- The green line represents the temperature after wearing fabric woven with Talent Cool series yarn.



TTRI財團法人紡織產業綜合研究所

Taiwan Textile Research Institute

試驗報告

TEST REPORT

日期: Aug. 15, 2014

收件日期: Aug. 11, 2014

報告編號: TP308472

數量: 1PC

報告頁次/頁數: (P1/1)

來文字號: FE-14-16

報告抬頭: FOUR ELEMENTS ENERGY BIOTECHNOLOGY CO., LTD.(T8726)

試件類別: Knitted Fabric

地址: 2F-6, .NO. 150, JILIN ROAD, TAIPEI 10458, TAIWAN, R.O.C.

正本

ORIGINAL

Test Items	Test Results	Test Methods
Average temperature (°C)	31.5	ASTM D7024-2004(Modify)

Note: Sample description is given by the client: 90% SMELLESS NYLON (70D/68F), 135gm/m2

10% SPANDEX (20D). 135gm/m2

BUYER NO.: 14060060

ART NO.: ECO-1023

FAR IR EMISSIVITY

There are several potential benefits associated with materials that have high far infrared emissivity

- Thermal Comfort
- Improved Circulation
- Pain Relief
- Detoxification
- Skin Health
- Stress Reduction
- Improved Sleep
- Transfer energy

Test Item: Far IR emissivity
Brand Name: Four Elements Energy Biotechnology
Model: ---
Serial No.: 202209-1

Test Results and Descriptions

I. Test Results

1. Sample identification ^{Note 1}: 92% I-Mydrive Polyester 8% Spandex
2. Sample condition: The appearance of sample was shown in Figure 1



Figure1 Photo of test sample

3. Test Data ^{Note 2}

Measurement principle	Temperature (°C)	Total Normal Emissivity @ (8~14) μm	Total Normal Average Emissivity @ (8~14) μm
ASTM E1933-14 (2018)	33.9	0.92	0.92
	34.1	0.92	
	34.0	0.92	
	36.5	0.91	0.91
	36.4	0.90	
	36.5	0.91	
	45.6	0.89	0.89
	45.7	0.89	
	45.7	0.88	

- Note 1: The test sample with its identification and information is provided by the client, and the test report is merely valid for this sample.
- Note 2: The test report merely reflects the test results of the consigned matters of the client and is not a certification of functions of the related products. This report is for reference only and shall not be used for commercial promotion such as advertisements, publications, etc.

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Look forward To hearing From You.

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Picture from TITAS