



GERMAGIC™ Provide Safer Environment for Royal Thai Consulate-General, Hong Kong

GERMAGIC offered sanitizing and disinfecting services to the Royal Thai Consulate-General, Hong Kong by applying **GERMAGIC™ THYME** in their office on March 20, 2020. Mr. Tull Traisorat, Consul-General of Royal Thai Consulate-General expressed his interest in **GERMAGIC™** products developed by the HKUST-CIL Joint Laboratory of Innovative Environmental Health Technologies and would like to introduce them to Thailand.

Mr. Tull Traisorat met with Mr. Hamilton Hung, Chief Marketing officer of **Chiaphua Industries Limited**, manufacturer of **GERMAGIC™ THYME** and invited **Chiaphua** to set up a production line in Thailand to directly supply the local Thai market. This disinfectant has been passed by leading testing centers around the world and has an effective period of up to 90 days. It complies with US Environmental Protection Agency (EPA) guidelines in its ability to inactivate the coronavirus that causes the COVID-19 disease. Thailand would like to apply it to government premises, public transportation and airports to provide a safer environment for Thai Citizens and tourists. He was impressed by this Hong Kong local invention and admired **Chiaphua's** support to local scientific research. He wishes to visit the HKUST-CIL Joint Laboratory of Innovative Environmental Health Technologies as soon as the epidemic is over.

GERMAGIC™ THYME was developed by a team led by Prof. Yeung King Lun, of the HKUST-CIL Joint Laboratory of Innovative Environmental Health Technologies and delivers a smart coating that is proven to be effective in killing viruses, bacteria and even hard-to-kill spores. It can inactivate up to 99.9 per cent of highly infectious viruses such as measles, mumps and rubella, and 99.9 per cent of surrogate feline calicivirus – a gold standard for disinfection efficiency – and is more resistant than coronaviruses such as the one responsible for the COVID-19 epidemic.

Mr. Hamilton Hung said, 'We are very honored that **GERMAGIC™** products have won the favor of the Royal Thai Consulate-General, Hong Kong. As a company focusing on local scientific technology research and development, we are very proud of it. As COVID-19 is outbreaking in the world, we hope that we can promote **GERMAGIC™**, this great invention of Hong Kong to the world, and work together with the world to stop the spreading of the virus and make a better community.'

In efforts to help the society fight the COVID-19 outbreak, **Chiaphua Industries Limited** has applied **GERMAGIC™ THYME**, the smart coating to over 150 daycare centers, elderly homes, kindergartens, primary and secondary schools. Other venues include shopping malls, school buses, churches and sport training facilities. CIL has also donated up to HK\$1.5 million worth of anti-microbial air filters – a potent air purification technology developed by Prof Yeung's team in 2017, to various hospitals in the mainland, including Wuhan's emergency Huoshenshan Hospital.

GERMAGIC

Germicidal Coating

About GERMAGIC™ THYME

The main ingredients of **GERMAGIC™ THYME** is Polyethylenimine and Thyme Essential Oil. The essence of new coating technology lies with the creation of surface moieties that actively disrupt the microbial envelope and biomolecules, rendering microorganisms nonviable upon contact. The coating also prevents microbial adhesion on the surface, thus keeping it free of microbial contaminants. Using a special blend of antimicrobial polymers, the new coating effectively kills up to 99.99 per cent of bacteria and viruses through contact killing and anti-adhesion technology, including Rubella, avian influenza, H1N1 and FCV – a non-enveloped virus that is among the hardest to kill. According to a U.S. EPA guideline in 2016, being effective against FCV is equivalent to being able to inactivate the coronavirus – an enveloped virus that is easier to sterilize than non-enveloped ones.

GERMAGIC™ THYME combines antimicrobial encapsulation with germicidal thyme essential oil for a more long-lasting and durable effect. Our research team has identified thyme essential oil to be the most potent among hundreds of other natural essential oils. Thymol, a terpene from thyme, plays the prominent role in thyme essential oil's antimicrobial effect. The product is designed for use on different surfaces including metals, concrete, wood, glass, plastics as well as fabrics, leathers and textiles without changing the materials' appearance and tactile feel. According to the Technical Standard for Disinfection issued by the National Health Commission in the mainland, the coating is proven to be non-toxic and is safe for skin and the environment. **GERMAGIC™ THYME** is confirmed to be effective against drug-resistant microorganisms during field studies in local hospitals. Its use in hospital privacy curtains saw more than 98.7 per cent reduction in drug-resistant bacteria. It is also a Hong Kong Eco Mark product.

About Chiaphua Industries Limited

From humble beginnings in the early 1920s as a small, privately held metal stamping business, Chiaphua Industries (www.chiaphua.com.hk) has grown into a robust global enterprise.

Chiaphua's long history has given the company a firm foundation from which to build upon for continuing success today. Over the past 50 years, Chiaphua has been involved in the manufacture of an extensive range of industrial and consumer products, including computers, clocks, sea-freight containers, lighters, toys, silver-plated hollowware, security and telecommunications equipment, electrical appliances, motors and power tools. Chiaphua Industries' success is built on the guiding principles of integrity, harmony and partnership laid down by our founding members. These values have enabled us to forge a number of long-standing joint venture alliances with some of the world's biggest and most recognized consumer brand companies.

In addition to our joint venture partnerships, Chiaphua Industries also maintains contract manufacturing relationships with many of the world's leading brand name companies. Through this global network, we enjoy worldwide representation in oral care, household appliances, writing instruments, telecommunications and environmental treatment markets. Besides being a manufacturing powerhouse, we are also expanding into the retail, hospitality and real estate business in recent year following our Group's success. Chiaphua Industries is a

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highly respected multinational and has considerable international stature. It is recognized for its entrepreneurial spirit and its strong sense of integrity, garnering the respect and loyalty of world-class customers and partners. In its continued commitment to excellence, the organization encompasses traditional values of Enterprise and Harmony. Commitment to excellence has been achieved through working closely with Chinese and overseas organizations in research and development, enabling Chiaphua to introduce innovative products to world markets.

GERMAGIC is a germicidal technology owned by Chiaphua Industries Limited. The essence of **GERMAGIC** technology is using encapsulation technology for controlled-release of active antimicrobials.

Photo Caption:

01 **GERMAGIC** service team applying the **GERMAGIC™ THYME** coating to the Royal Thai Consulate-General, Hong Kong.

02 Mr. Tull Traisorat, Consul-General of Royal Thai Consulate-General met with Mr. Hamilton Hung, Chief Marketing officer of **Chiaphua Industries Limited**.

End

This press release is distributed by N Square Company Limited on behalf of GERMAGIC and Chiaphua Industries Limited

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GERMAGIC™ 消毒劑獲泰國駐香港總領事館青睞

GERMAGIC™ 團隊周五(2020年3月20日)到訪泰國駐香港總領事館，為領事館噴灑 GERMAGIC™ THYME 菌魔力百里香消毒劑。泰國駐港總領事李志強(Tull Traisorat)讚揚 GERMAGIC™ 這個由「香港科技大學—捷和實業有限公司創新環境健康技術聯合實驗室」研發的技術，並有意引入泰國本土使用。

泰國駐港總領事李志強(Tull Traisorat)與 GERMAGIC™ THYME 菌魔力百里香消毒劑製造商、捷和實業有限公司副總裁兼市場營銷總監洪思聰先生會面。期間總領事李志強誠邀捷和實業到泰國開設廠房生產 GERMAGIC™ 產品，直接供應泰國當地市場。由於消毒劑有效期長達 90 天，又獲世界多個檢測單位測試認證，更符合美國環保局對殺滅新型冠狀病毒 (COVID-19) 的要求，泰國方面有興趣在政府轄下設施，例如公共交通工具、機場等使用，保障市民以及遊客。他又表示非常欣賞 GERMAGIC™ 這個香港本地研發的科技，讚賞捷和實業對本地科研的支持，希望疫情過後可以到科大參觀「香港科技大學—捷和實業有限公司創新環境健康技術聯合實驗室」。

GERMAGIC™ THYME 菌魔力百里香消毒劑是「香港科技大學—捷和實業有限公司創新環境健康技術聯合實驗室」楊經倫教授團隊研發的一款新型多層次殺菌塗層，可有效殺滅病毒、細菌甚至極難被殺死的孢子。研究結果顯示，這種殺菌塗層不僅有效殺滅99.9%的麻疹、腮腺炎、風疹等高傳染性病毒，更可殺滅99.9%的貓杯狀病毒。貓杯狀病毒被視為檢測殺毒效果的指標，其抗藥性高於所有冠狀病毒，包括引發當前疫情的新型冠狀肺炎病毒 (COVID-19)。

洪思聰先生表示：「我們十分榮幸GERMAGIC™ 的產品能獲得泰國駐港領事館的青睞，作為一家專注本土科技研發的公司，我們實在引以為傲。目前新冠病毒在全球爆發，我們希望可以將香港這項發明推廣至世界各地，與全世界同心投疫、造福社群。」

為協助社會對抗COVID-19疫情，捷和實業有限公司已將GERMAGIC™ THYME塗層應用到逾150多家日托中心、護老院、幼稚園和中小學，其他場所還包括商場、校車、教堂與運動訓練設施。捷和實業更捐贈了價值150萬元的抗菌空氣淨化濾網予內地多間醫院，包括武漢火神山醫院。該空氣淨化系統是「香港科技大學—捷和實業有限公司創新環境健康技術聯合實驗室」團隊於2017年研發的空氣淨化技術。

有關GERMAGIC™ THYME菌魔力百里香消毒劑

GERMAGIC™ THYME 菌魔力百里香消毒劑，主要成份包括聚乙炔亞胺 (Polyethylenimine)及百里香精油 (Thyme Essential Oil)。其技術原理是利用可物理刺破微生物的物料製作微膠囊，再包裹擁有高滅菌性的百里香精油，在物體表面形成殺菌膜，殺菌膜接觸到微生物的包膜和生物分子時會將之破壞，使之失去活性。塗層亦能防止微生物在物體表面粘附，從而達至長效抗菌，消毒劑有效期長達90天。塗層使用了一種特殊的抗菌聚合物，透過接觸殺滅和抗菌黏連等技術，可有效消滅99.9%的細菌和病毒，包括風疹、禽流感、流感如H1N1型，以及貓杯狀病毒等。貓杯狀病毒是一種無包膜病毒，被公認為最難殺滅的病毒之一。根據美國環境保護署2016年的指引，能有效殺滅貓杯狀病毒，等同有效殺滅冠狀病毒。因為後者屬於包膜病毒，在抗藥性上低於無包膜病毒。

GERMAGIC™ THYME採用的百里香精油是研發團隊用了五年時間，從世界各地搜羅超過200種天然精油，經過反覆測試挑選出來的天然殺菌精油。百里香精油中的百里香酚是一種天然的強效殺菌劑。為了確保百里香精油的穩定質量，消毒劑採用的天然百里香精油更由澳洲擁有超過100年精油提煉經驗的精油廠商提供。此外，塗層的功能多樣化，可用於包括金屬、混凝土、木材、玻璃、塑料，以至織物、皮革及纖維等不同物料，同時亦已經通過多重安全測試，包括多次完整皮膚刺激測試、陰道粘膜刺激測試、急性眼刺激測試、急性吸入毒性測試、金屬腐蝕測試、重金屬含量測試等等，確保消毒劑安全且無刺激性，對人體和環境無害。這消毒劑亦曾與香港醫院合作，在醫院中的隔離布簾上測試其長效滅菌功效。透過為期半年的試驗發現，使用了**GERMAGIC™ THYME**的隔離布簾，在醫院的實際應用上可以有效降低細菌量(包括抗藥性細菌)達九成以上。本產品亦已經被香港認證中心認可，是香港綠色標誌產品。

有關捷和實業有限公司

捷和實業(www.chiaphua.com.hk)是一家備受尊重、具相當國際地位的跨國公司，由1920年代從事金屬沖壓起家，現時已發展成為一家具規模的全球性企業。在過去50年，捷和實業一直參與製造各種工業和消費產品，包括電腦、鐘錶、海運集裝箱、打火機、玩具、鍍銀空心件、安全和電信設備、電器、電機和電動工具等。

捷和實業的企業精神和強烈的誠信意識，贏得了世界級客戶和合作夥伴的尊重和忠誠。這些價值觀使我們贏得世界級客戶和合作夥伴的長期合作夥伴關係。通過這個全球網絡，我們享有口腔護理、家用電器、書寫工具、電信和環境治療市場等業務的全球代表權。此外，透過與中國和海外組織緊密的研究和開發合作，實現了卓越的承諾，使捷和實業能夠向世界市場推出創新產品。近年來，捷和實業除了作為製造業強強勢集團之外，還

在擴大零售、酒店業和房地產業務。

菌魔力是捷和實業的嶄新殺菌技術，其核心是使用微膠囊緩釋技術控制活性殺菌劑的釋放。

圖片說明：

01 **GERMAGIC**團隊為泰國駐香港領事館噴灑**GERMAGIC™ THYME**菌魔力百里香消毒劑。

02 泰國駐香港領事館代表與**GERMAGIC™ THYME**菌魔力百里香消毒劑製造商、捷和實業有限公司副總裁兼市場營銷總監洪思聰先生會面。

完

此稿由 N Square Company Limited 代 **GERMAGIC™**及捷和實業有限公司發放。

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