



30062 新竹市食品路331號
No.331 ShiPin Road, Hsinchu City 30062, Taiwan, R.O.C.

TEL: (03) 5223191
FAX: (03) 5214016

委託試驗報告書 TEST REPORT

委託者：微星科技股份有限公司
Applicant：
委託者地址：新北市 中和區立德街69號
Address of applicant：
物品名稱：申請 110SA01630 UVC Purifier 英文報告
Name of Article：
物品有效日期：
Article Expiry Date：
樣品描述：批號:MS-5503

報告書號碼：110SA01680
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試驗項目 (Items)	單位 (Unit)	結果 (Result)	定量/偵測極限 (LOQ/LOD)	方法 (Method)
(1).英文報告		As the attachment. (2 pages)		

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簽發者

Authorized Representative:



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Report NO. : 110SA01680

Applicant : Micro-Star INT'L CO., LTD.

Name of Article : UVC Purifier

Method : AOAC Official Method 991.14 Coliform and *Escherichia coli* Counts in Foods

Evaluation of UVC Purifier for Microbial Disinfection Effectiveness

A. Aims : To evaluate the bactericidal effect of the UVC Purifier against *E.coli*.

B. Test Protocol :

1. Prepare the suspension of *Escherichia coli* BCRC 10675 to a concentration of about 10^4 CFU/mL.
2. Inoculate 2 sets of 6 cm diameter petri dish agars plate each with 0.1 mL of the bacterial suspensions (the final concentration is about 10^3 CFU/petri dish agar).
3. The photos of the appearance and the interior of the UVC Purifier equipment provided by the manufacturer are shown in Fig. 1 . During the experiment, put the manufacturer's equipment in the laminar flow for testing.
4. Expose one petri dish agar to the UVC Purifier at a distance of 7 cm from the UVC Purifier for 30 sec. The other petri dish agar without UVC Purifier exposure is treated as a control blank .
5. Incubate medium of each group at 35°C for 48 hours, and then count the number of bacteria in colony forming unit (CFU).

C. Results :

The concentration of *Escherichia coli* BCRC 10675 on the plate of the control sample was determined as 2.4×10^3 CFU/plate. After being exposed to the UVC Purifier for 30 sec, the bacterial load of the test sample was determined as <1 CFU/plate (Fig. 2). The disinfection effectiveness of the UVC Purifier was calculated as >99.9 % (Table 1).

D. Conclusion :

Under the exposure for 30 sec from a distance of 7 cm, the disinfection effectiveness of the UVC Purifier against *Escherichia coli* BCRC 10675 is calculated as >99.9 %.



E. Table and Figures :

Table 1. The disinfection effectiveness of the UVC Purifier against *Escherichia coli* BCRC 10675.

Test	Bacterial load (CFU/ petri dish agar)	disinfection effectiveness (%)
without UVC Purifier exposure.	2.4×10^3	— ⁽¹⁾
under the exposure of UVC Purifier for 30 sec.	<1	>99.9 ⁽²⁾

Note : (1) without UVC Purifier exposure. (2) disinfection effectiveness (%) = (bacterial load before exposure – bacterial load after exposure) / bacterial load before exposure x 100 %.



Fig 1. UVC Purifier equipment provided by the manufacturer.



Before exposure

After exposure

Fig 2. Photo of petri dish agars before and after subjected to the exposure of the UVC Purifier for 30 sec.