

TEST REPORT



Report No. : 24-055265-02-1

Page of Pages : (1) / (4)



1. Client

Name : SH Scientific Co., Ltd.

Address : 92, Jangukjin-ro, Yeondong-myeon, Sejong-si, Republic of Korea

Date of Receipt : 2024. 08. 21.

2. Use of Report : For quality control

3. Test Sample

Description : VOCs removal rates

Manufacturer : SH Scientific Co., Ltd.

Model Name : Arm Hood(SH-HD-MUP)

Serial Number : ***

Remark : ***

4. Date of Test : 2024. 08. 21. ~ 2024. 08. 23.

5. Location of Test :

KTL Permanent Test Lab (Address : 87, Digital-ro 26-gil, Guro-gu, Seoul, KOREA)

On Site Testing

6. Test Standard/Method : Refer to the attached method (proposed by client)

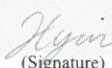
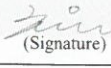
7. Test Results : Refer to the attached results

Note : 1. This report is limited to samples submitted by the applicant and is prohibited from being used for legal or other reasons of dispute.

2. This document is valid only in its original document, and any reproduced copies and electronic copies are not valid. ("Original" means all the reports provided by the KTL including the security procedures.)

3. You can check the contents of the report by scanning the 2D Barcode below. The identity of original reports can be checked in the "Confirm original report" window of the customer's homepage (customer.ktl.re.kr).

4. This report is not related to KS Q ISO/IEC 17025 & KOLAS Accreditation.

Affirmation	Tested by	Technical Manager
	Name : Hyun Seung-min  (Signature)	Name : Lim Eun-ju  (Signature)

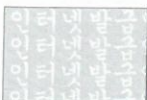
2024. 10. 24.

Korea Testing Laboratory





87, Digital-ro 26-gil, Guro-gu, Seoul, KOREA Tel.+82-2-860-1693 Fax. +82-2-860-1699

FP104-07-00



※ 위 마크는 추후 전자확인증 대조 프로그램에서 원본대조시 사용되는 2D코드입니다.

	Report No. : 24-055265-02-1 Page of Pages (2) / (4)	
---	--	---

Test Results

1. Test outline

1) Test sample description

Description		VOCs removal rates
Model name		Arm Hood(SH-HD-MUP)
Equipment under test (EUT)	Specifications	330 m ³ /h
	Dimension	265 mm (W) × 405 mm (D) × 550 mm (H)
	Operating condition	10 level of air intake and exhaust volume
Injected gas		(100 ± 10) nmol/mol of each component(N ₂ Balance) - RIGAS(Certificate No. 2406PRJ01952A)

2) Test condition

Test item		Benzene, Toluene, Ethylbenzene, Xylene, Styrene
Test method		1) Inlet sample is collected from the mixing chamber, which is positioned in front of the EUT*. The mixing chamber is maintained at a constant flow of 1 L/min of VOCs gas mixture submitted by the applicant. 2) Outlet sample is collected from the exhaust position of the EUT where the VOCs gas mixture is filtered through the inner filter at a constant rate of 1 L/min. The EUT is operated under maximum exhaust condition(Level 10). 3) Sampled sorbent tube is analyzed by ATD-GC/MS.
Air Sampling	Test date	2024. 08. 21.
	Location of Test	SH Scientific Laboratory (Yeondong-mueon, Sejong-si, Republic of Korea)
	Sampling pump	Mini Pump (MP-Σ30KN, SIBATA)
	Sampling tubes	Tenax TA(29741-U, Supelco)
	Sampling volume	100 mL/min × 10 min, 1 L (Inlet) 100 mL/min × 20 min, 2 L (Outlet)
Analysis	Test duration	2024. 08. 21. ~ 2024. 08. 23.
	Measurement equipment	ATD (Unity-xr, Markes) - GC/MS (QP2020NX, Shimadzu)

* EUT : Equipment under test.



2. Test results

Substances	Results ($\mu\text{g}/\text{m}^3$)	
	Inlet (Mixing chamber at intake position)	Outlet (Exhaust position)
Benzene	328.8	N.D.* (LOD 0.5)
Toluene	378.0	N.D. (LOD 0.5)
Ethylbenzene	450.3	0.7
Xylene**	1 309.4	4.7
Styrene	430.3	N.D. (LOD 0.5)

* N.D.(Not Detected) : Below the limit of detection(LOD).

** Xylene : Sum of o-Xylene, m-Xylene and p-Xylene.

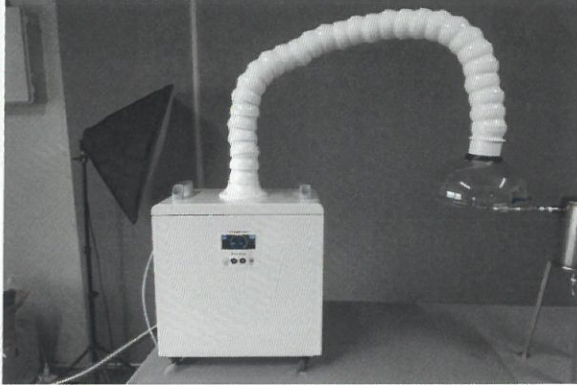


< Equipment under test : Arm Hood(SH-HD-MUP) >





<Attachment>



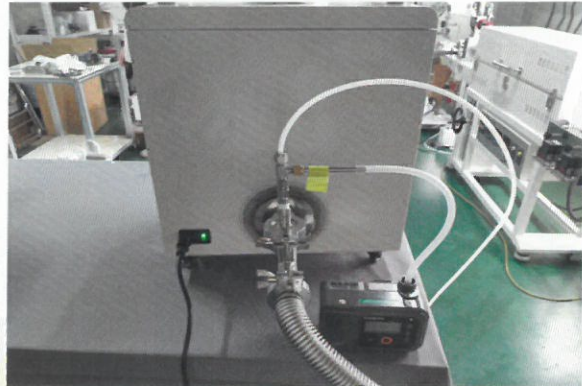
< Equipment under test (SH-HD-MUP) >



< Operating condition(Level 10) >



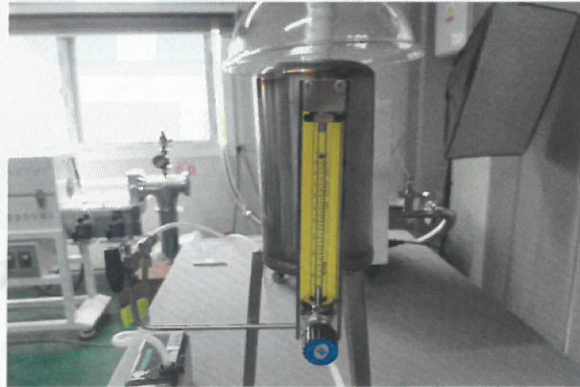
< Inlet(Mixing chamber at intake position)Sampling >



< Outlet(Exhaust position)Sampling >



< Injected gas >



< Gas injection flow rate (1 L/min) >

End of document.

