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Air Cleaner Test Report

Applicant	:	RHT Industries Limited
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1. Sample Description

Product	:	Air Cleaner
Brand Name	:	b-MOLA
Model No.	:	NCCO1701
No. of Sample Received	:	1
Test Date	:	27 Mar 2019 – 27 Mar 2019
Test Item(s)	:	Pollutants Removal Efficiency
Test Reference(s)	:	In-house method SOP200 (for VOC removal rate)
Test Result	:	See the attached sheets
Remark	:	N/A

2. Detail Description of the sample

b-MOLA/NCCO1701

NCCO Filter and HEPA

3. Results of Removal Efficiency for Chemical Pollutant

Brand / Model No.	Operating Mode	Test Chemical	Initial Concentration	Removal Efficiency (%)
b-MOLA/NCCO1701	SS	Toluene	106.9 ppm	99

Remark: Initial concentration is set within 100±10ppm.

In a $1m^3$ chamber, chemical was injected into the chamber by a syringe and evaporated by a hot plate. Internal circulation was turned on throughout the test to ensure the uniformity of chemical concentration inside the chamber. Initial concentration (C_0) of the chemical was recorded before switching on the air cleaner with a range of 100 (±10) ppm. Then, the air cleaner is switched on for 60 minutes and the chemical concentration was recorded as C_{60}, the final concentration of chemical.

The test was repeated again without the air cleaner to determine the natural decay of the chemical at the test chamber. Chemical was injected into the chamber by a syringe and evaporated by a hot plate with an initial concentration (C_{N0}). The final concentration (C_{N60}) was determined 60 minutes later

New filters and HEPA have been used for each chemical test.

Calculation:

$$A_1 = \frac{C_0 - C_{60}}{C_0}$$

$$A_2 = \frac{C_{N0} - C_{N60}}{C_{N0}}$$

$$\text{Removal Efficiency} = \frac{C_0(1 - A_2) - C_{60}}{C_0(1 - A_2)}$$

End of Report