



**Acron International Technology Limited**

*Your Technical Companion*

*HKUST Entrepreneur*

## **Air Cleaner Test Report**

Applicant : NCCO Global Limited

Address : Block B, 2/F, Goodwill Industrial Building, No. 36-44 Pak Tin Par  
Street, Tsuen Wan, New Territories, Hong Kong

Application Number : KJ2006002 – 06

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**Acron International Technology Limited**

*IAQ Contractor, IAQ Control Facilities Supplier, IAQ Consultant*

*Subsidiary company of the Hong Kong University of Science and Technology*

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## 1. Sample Description

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Product	: Air Cleaner
Brand Name	: Westinghouse
Model No.	: NCCO1804
No. of Sample Received	: 1
Test Date	: 22 Jun 2020
Test Item(s)	: Pollutants Removal Efficiency
Test Requested	: Ethylbenzene
Test Reference(s)	: In-house method SOP200 (for VOC removal rate)
Test Equipment	: Honeywell instrument ppbRAE 3000
Equipment no.	: E002 – 002
Test Result	: See the attached sheets
Remark	: N/A

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## 2. Detail Description of the sample



**Westinghouse/ NCCO1804**



**NCCO Reactor and HEPA**

### **3. Testing Method of Removal Efficiency**

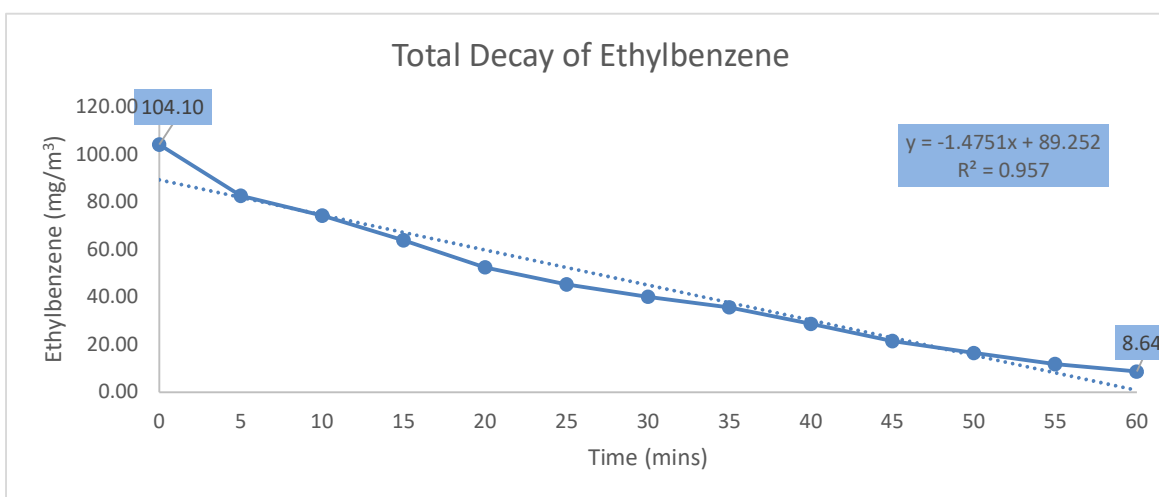
In a  $0.027\text{m}^3$  chamber, chemical pollutant was injected into the chamber by a syringe and evaporated by a hot plate. Internal circulation was turned on throughout the test to ensure the uniformity of chemical pollutant concentration inside the chamber. Initial concentration ( $C_0$ ) of the chemical pollutant was recorded before switching on the air cleaner with a fixed volume of VOC pollutant. Then, the air cleaner is switched on for 60 minutes and the chemical concentration was recorded as  $C_{60}$ , the final concentration of chemical.

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

#### 4. Results of Removal Efficiency

Brand/ Model No.	Operation Mode	Test Chemical
Westinghouse/ NCCO1804	Blue Light Mode	Ethylbenzene

Initial Concentration (ppm)	Total Decay, $k_e$ ( $\text{min}^{-1}$ )	Removal Efficiency (%)
104.10	0.039	91.7



**Figure a. Total Decay of Ethylbenzene**

Calculation:

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

A<sub>1</sub>: Removal Efficiency (%)

C: Concentration of testing subject (ppm)

**\*\*\* End of Report \*\*\***