AUSTRALIAN NATIONAL TESTING LABORATORIES PTY. LTD.

Unit 17/ 15 Suscatand Street, Rocklea, Qld, 4106
PO Box 16, Sherwood, QLD, 4075, Australia
Telephone: 61 (07) 3274 0737
Facsimile: 61 (07) 3274 0712

ANTL Test Report # 5297.11

CLIENT: DR. AIRFRESH PTY LTD

Address: 42 Riverside Road
Chipping Norton
NSW 2170

Name of Manufacturer: Zhuji Jinbo Environmental Protection Technology Co Ltd.

Appliance Details: Recirculating Kitchen Hood

Model: CCAEPI-EP-2019-790

Serial Number: 220909121

Test Parameters:

A review of UL710B and ASHRAE standards 62.1 2016 are referenced with the following tests to provide a representative worst case operating test. This can be used to show evidence of suitability to maintain acceptable levels of emissions as required by the Building Code of Australia.

1) Time weighted average (TWA) of <5.0mg/m^3 for particulate matter (<2.5µm or PM2.5) for the indoor space.

2) Sufficient airflow for capture of the effluent and grease-laden air from the cooking.

Appliance Description:

The appliance is an electric operated floor mounted recirculation filter unit. The unit provides filtration and removal from the air stream products produced during cooking operations. The units are designed to operate with bench top mounted cooking equipment.

Tested by: 

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Testing Setup and Notes:

The manufacturer's instructions and listed types of cooking appliances that can be used with the recirculation hood were reviewed and it was deemed that cooking with twin wok burners would represent the worst case cooking test.

The cooking test was carried out simultaneously with two gas fired wok burners loaded with fried rice, noodles, bacon and associated oils and sauces and run through a simulated high load cooking test for a period of 1hr, pre and post cooking periods were recorded to show before and after test baseline contaminate levels to allow effectiveness of the cooking test to be made.

This test was conducted to determine whether the Recirculating Hood produced an adequate indoor air quality when operated within simulated high load cooking conditions. Also that sufficient airflow was present for capture of the effluent and grease-laden air from the cooking.

AS 1668.2 is the standard for ventilation and air conditioning in buildings in Australia as such is the applicable standard for this product. AS 1668.2 allows for the provision of local exhaust as a proprietary kitchen exhaust equipment (AS 1668.2 clause 3.6).

The following particulate sizes were recorded.

> Particulate matter of of <1mg/m^3 (PM1), <2.5mg/m^3 (PM2.5), <4mg/m^3 (PM4) and <10µm or PM10 were recorded.

PM2.5 is considered "respirable" and can penetrate the lungs. This is significant for the determination of indoor air quality.

This test was to determine the total particulate level produced by a worst-case cooking load in the two woks and to determine its suitability for use in a commercial kitchen. Testing was in a simulated kitchen with minimum outdoor airflow rates as per AS 1668.2 section 2 and appendix A.

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Ambient Temperature:

The test was conducted between 24-26°C

Measuring Equipment:

Dust Track DRX.
Model: 8533

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Recirculating Kitchen Hood under Test:

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Filtered air exhausts underneath the unit

Procedure:

Tested by: Checked by:

Results: (N/A=Not applicable; N/T=Not tested; N/R=Not requested; P=Pass; F=Fail)

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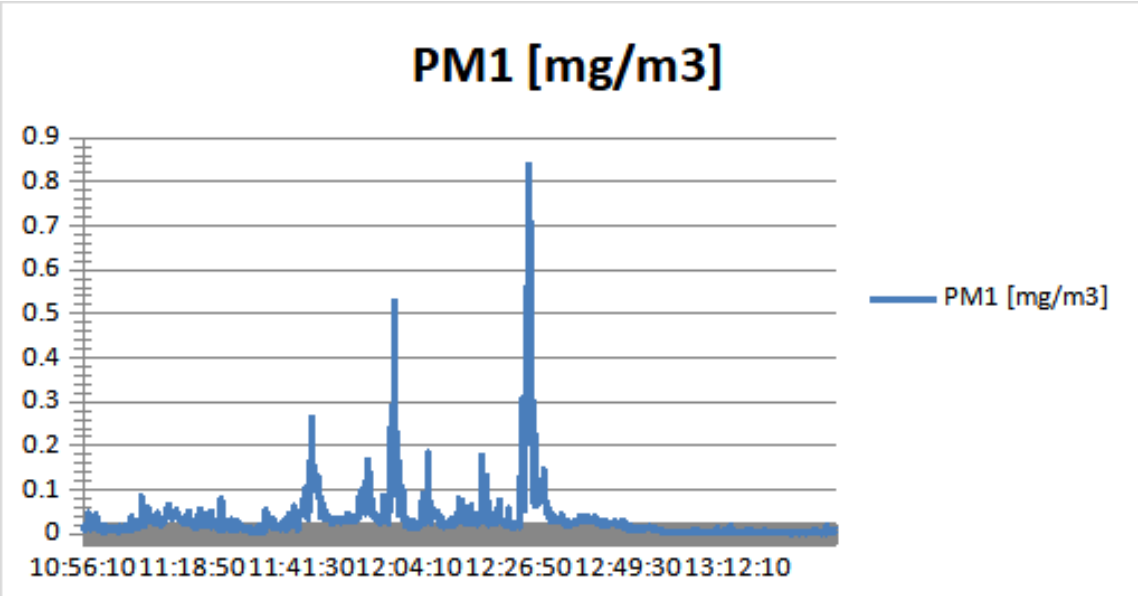
The air quality was recorded for 30 minutes before any cooking was carried out to establish a baseline level with the exhaust hood running.

After an hours cooking was completed the exhaust hood was left running for 30 minutes then turned off.

Air quality was recorded for a further 30 minutes to assess the resultant baseline had returned back to pre-test levels.

Recorded Readings:



Tested by: Checked by:

Results: (N/A=Not applicable; N/T=Not tested; N/R=Not requested; P=Pass; F=Fail)

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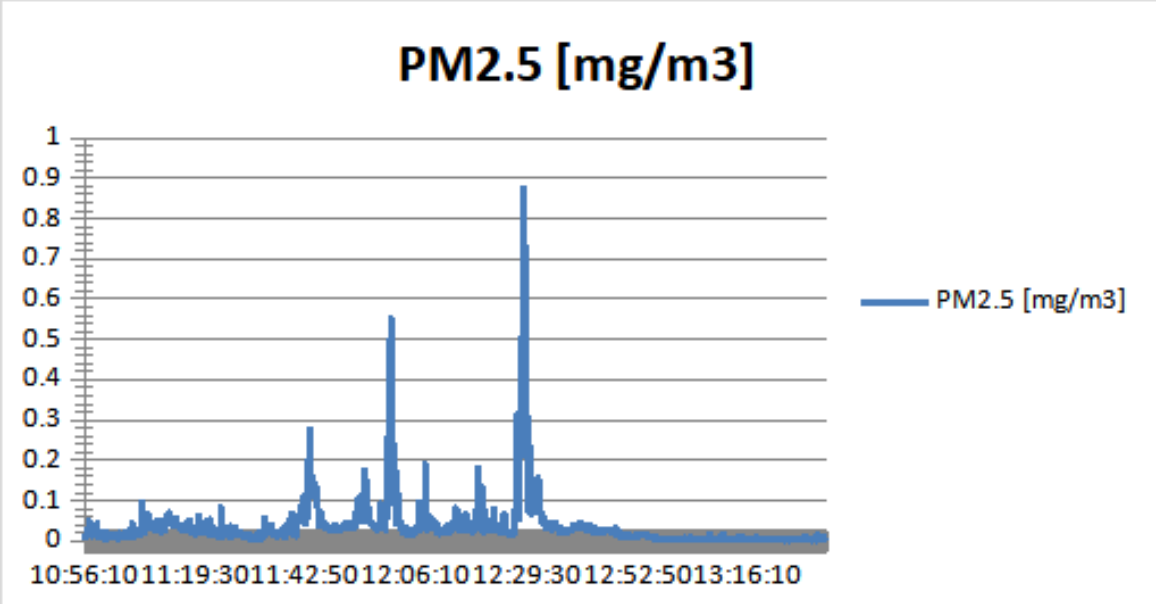

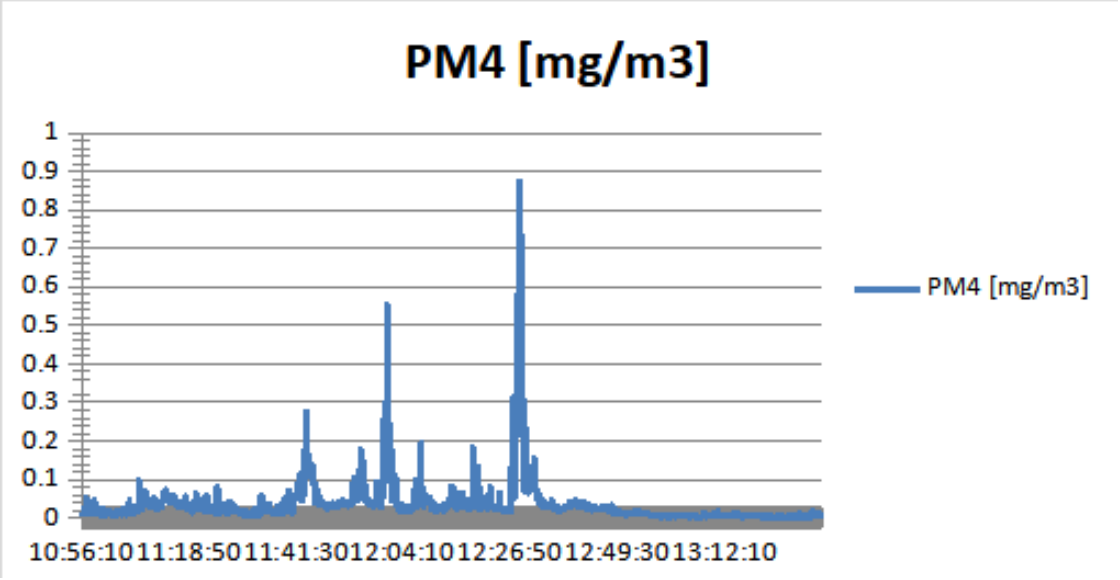

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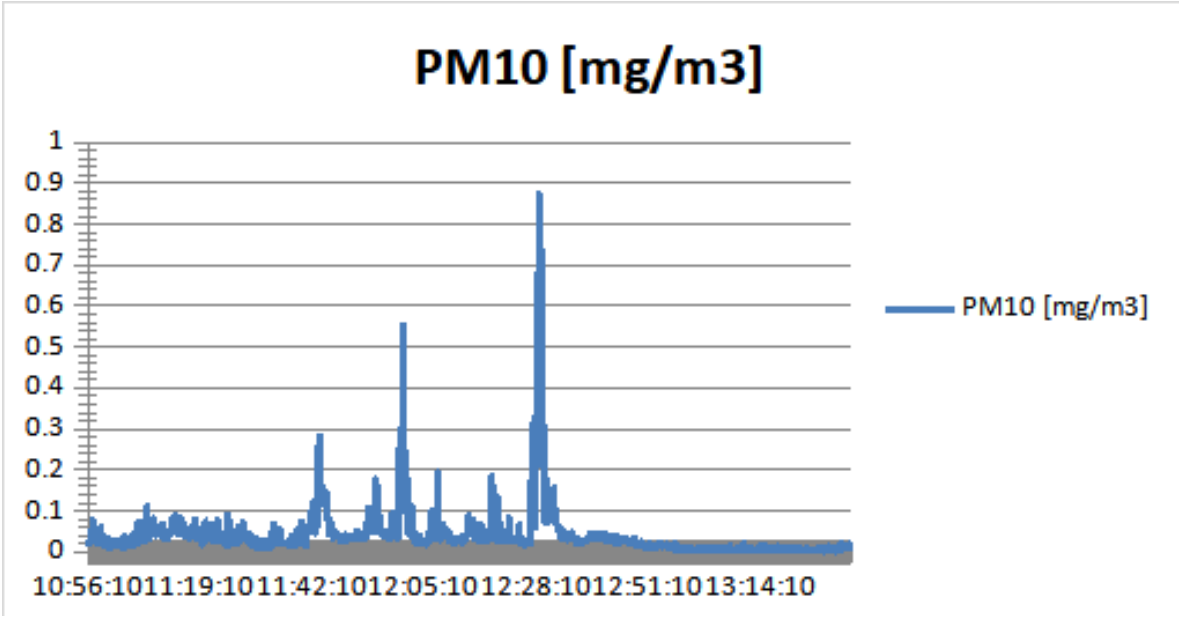

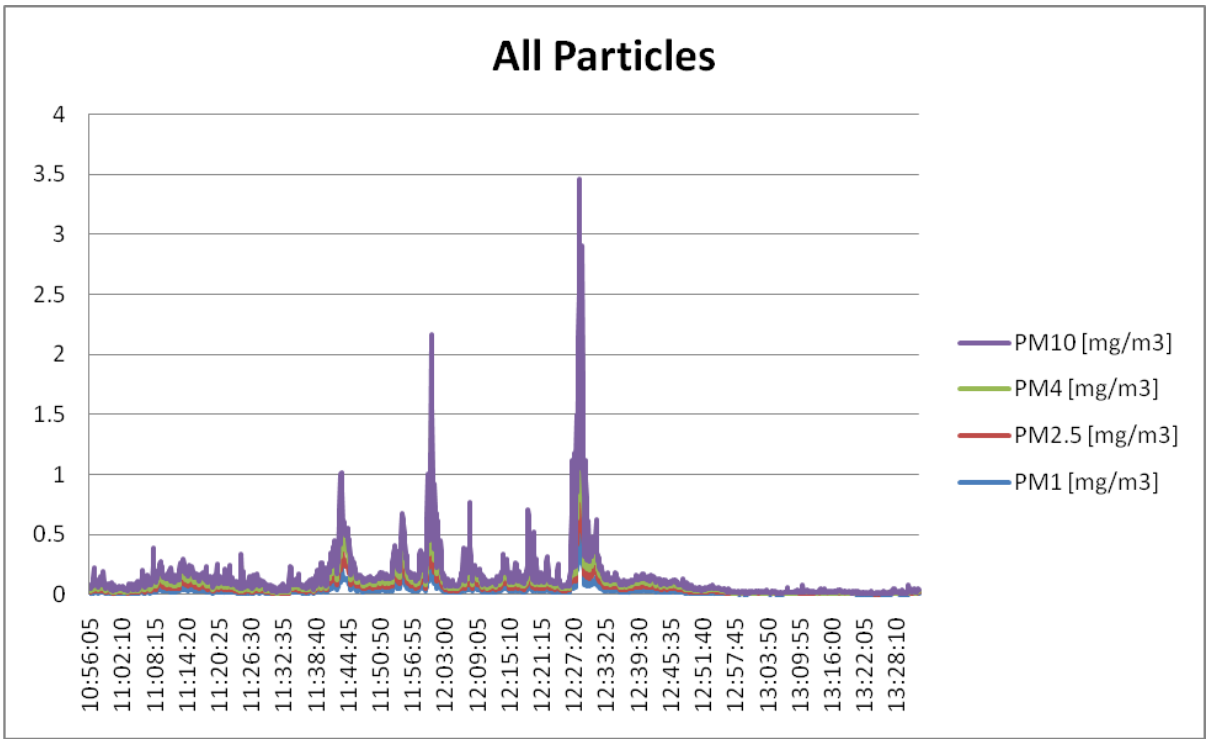

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Results:

The Recirculating hood maintained a time-weighted-average (TWA) of 0.012 mg/m3 for the PM2.5 mg/m3 particulates. The combined TWA level of the four measured particulates was 0.015 mg/m3 .

This was less than the PM2.5 of 5 mg/m3 benchmark set for the test.

The Recirculating hood satisfies the air quality requirements of ANSI/Ul 710B and ASHRAE standard 62.1 2016 by maintaining the PM2.5 level below a time weighted average of 5mg/m^3. Hence, these hoods satisfy AS 1668.2 section 3.6, proprietary based solutions.

Testing was carried out on a new, clean exhaust hood. Regular cleaning as specified by the manufacturers instructions will be required to maintain the performance of the exhaust hood.

Tested by: 

Checked by: