



Test Report No. T9379-01, Issue 1  
AS/NZS 1716:2012, Section 4.3.5, "Test of Filter Efficiency"  
Dane Taylor Technologies  
Fair Air Fire Mask and Filters  
5 November 2014

Authorized and Reviewed by:

A handwritten signature in black ink, appearing to read "Michael G. Gergel".

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Prabodh K. Patnaik  
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Australia

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**Summary:**

Three respiratory filters used for the Fair Air Fire Mask were evaluated for filter efficiency. The samples were submitted by Dane Taylor Technologies Pty Ltd and tested in general accordance with AS/NZS 1716:2012 Section 4.3.5. All three samples met the P2 filter requirements of the standard.

**Objectives:**

Testing to: *Australian/New Zealand Standard Respiratory protective devices AS/NZS 1716:2012, section 4.3.5, "Test of filter efficiency; Appendix I & L"*

**Materials:**

<i>Model No.</i>	<i>Description</i>	<i>Quantity</i>
Fair Air Mask	Fair Air Fire Mask & filters	3

Date provided by the Client: 25 September 2014  
Date tests authorized: 22 October 2014  
Dates of tests: 4 November 2014  
Supplier: Dane Taylor Technologies Pty Ltd.

**Equipment:**

Filter Tester, Type 1100 AL Flame Photometer, SFP Services Ltd (EQ#1165)

**Procedures:**

The testing protocols were in agreement with good laboratory practice for all tests. The equipment and instrument calibrations were verified current and within specification prior to use. The materials for assessment were inventoried, numbered (if needed) and logged upon receipt.

Samples of the Fair Air Fire mask and filters, provided by Dane Taylor Technologies were evaluated for filter efficiency. The samples were evaluated to *Australian/New Zealand Standard Respiratory protective devices AS/NZS 1716:2012, section 4.3.5, "Test of filter efficiency; Appendix I. & L"*

The photometer was set up according to the manufacturer's operating instruction. The challenge aerosol concentration was maintained within the range of 5 to 15 mg/m<sup>3</sup>, as specified in the standard. The airflow rate was maintained at 95 liters per minute. The mask and the filter were positioned inside the filter tester so as to have the brown color side of the filter facing the aerosol challenge. The percent aerosol penetration, through the filter and the resistance to penetration were recorded.

**Results:**

The results for the filter efficiency assessment are listed in Table I.

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**Results, continued:**

**Table I**  
 Filter Efficiency Results for Fair Air filter & mask

<i>Sample No.</i>	<i>Flow Rate (LPM)</i>	<i>Resistance (Pa)</i>	<i>Penetration (%)</i>	<i>Filter Efficiency (%)</i>	<i>Results</i>
1	95.5	65.0	3.99	96.0	<b>Pass</b>
2	95.5	70.3	3.68	96.3	<b>Pass</b>
3	95.6	56.8	4.23	95.8	<b>Pass</b>
<b>P2 Specification</b>	<b>95 ± 2</b>	<b>*</b>	<b>≤ 6 %</b>	<b>≥ 94.0 %</b>	

**Photographs:**



**Figure 1:** Fair Air Fire Mask with filter installed



**Figure 2:** Mask with filter attached for Filter test



**Figure 3:** Flame Photometer

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