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Title: **Foam Wound Dressing Testing - Moisture Vapour
Transmission Rate**

Date: **30 October 2006**

Report No: **06/2283/4**

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S . M . T . L .

subject: **Foam Wound Dressing Testing - Moisture Vapour
Transmission Rate**

date: **30 October 2006**

from: **Paul Fram
Princess of Wales
Tel: +44-1656-752820**

Report No: 06/2283/4

Test Report

06/2283/4

1. Name & Address of Client/Requesting Authority.

Ed Walton
Smith & Nephew
Healthcare Ltd.
Healthcare House
Goulton Street
Hull, HU3 4DJ
England, UK

Email:ed.walton@smith-nephew.com

2. Introduction

The SMTL were requested by the client to perform comparative testing on Smith & Nephew New Allewyn and Competitor A Foam Island Dressings.

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3. Test Product(s)/Sample(s)

TABLE 1. Test Product(s)/Sample(s) tested by SMTL.

Manufacturer	Item	Batch/Lot No	Quantity	Date Received
Smith & Nephew	New Allevyn Adhesive 10x10cm foam dressing	0637/ 66000599	55	04/10/2006
Competitor A	Product A 10x10cm foam island dressing	xxxxx/ xxxxxxxx	50	04/10/2006
Competitor A	Product A 10x10cm foam island dressing	xxxxx/ xxxxxxxx	5	04/10/2006

NOTE: The test results in this report relate only to the test sample(s) analysed.

3.1 Departures/Abnormalities of Sample Condition

None

4. Date of Testing

October 2006

5. Testing Details

5.1 Moisture vapour permeability

The moisture vapour permeability of the dressings was determined using SMTL test method TM-8.⁽¹⁾

In this test, a sample of dressing is applied to a Paddington cup (a modified Payne cup) to which is added 20 ml of a solution of sodium and calcium chloride containing 142 mmoles/litre of sodium ions and 2.5 mmoles/litre of calcium ions.

The cup is placed in an inverted position (with the test solution in contact with the film) in an incubator set at $37\pm 2^{\circ}\text{C}$ upon the pan of a top loading balance. The balance is connected to an electronic data logging device which records changes in the weight of the cup resulting from the loss of moisture vapour through the dressing. A tray containing 1 kg of freshly dried silica gel is placed in the bottom of the incubator to maintain a low relative humidity within the chamber.

At the end of the test the recorded data is down-loaded for examination.

5.2 List of SMTL Test Methods Used.

— TM-8 - MVTR of Dressings by Electronic Data Capture Method⁽¹⁾

5.3 Deviations/exclusions from, and additions to standard methods.

None

5.4 Sampling Details

All samples were selected and supplied by the client.

5.5 Sample Preparation

As stated in the SMTL test method.

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6. Results

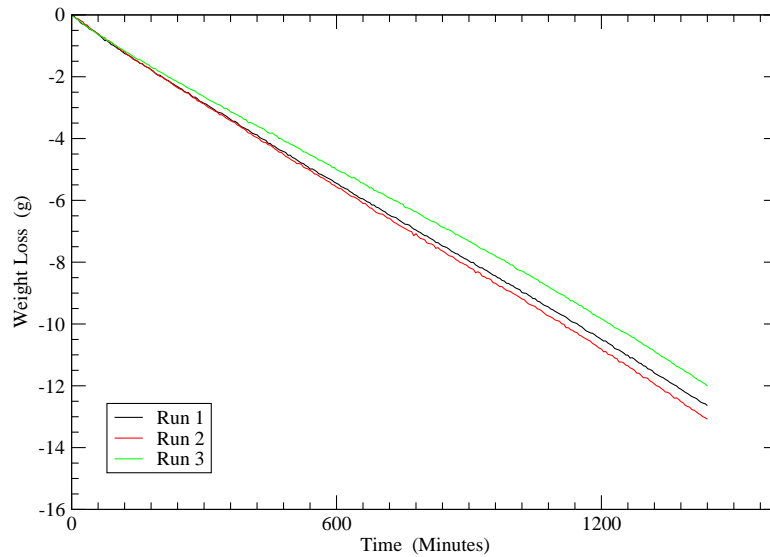
6.1 Moisture Vapour Transmission Rate

Results from the MVTR experiments are presented in Table 2, and are expressed graphically in Figures 1 and 2.

TABLE 2. Change in Balance Weight over 24 hours

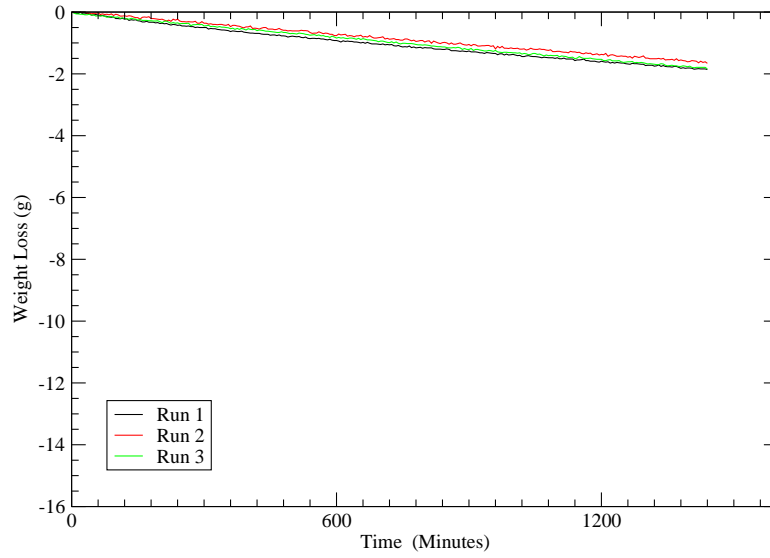
Dressing	Maximum MVTR (g/m ² /24Hrs)		
	Run 1	Run 2	Run 3
Allevyn Adhesive	12,363	12,820	11,614
Product A	1798	1642	1782

Figure 1. MVTR of Allevyn Adhesive



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Figure 2. MVTR of Product A Dressing



Authorised by: Peter Phillips
Acting Director, SMTL
January 2007

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1. Surgical Materials Testing Lab., "Moisture Vapour Transmission Rate from Dressings by Electronic Data Capture Method.," TM-8 ().

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