



New Age Veneers Publication

Test Results

**UV RESISTANCE OF NEW AGE VENEER – 2005
SANDBLASTED RANGE**

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UV RESISTANCE OF NEW AGE VENEERS - 2004 RETEST

July 2005

SUMMARY

CSIRO Division of Construction Manufacturing and Infrastructure Technology subjected a range of reconstructed veneer samples to accelerated ultra violet exposure in a Fluorescent Light Cabinet for 700 hours. Similar tests were conducted in September 2003. The results of Colour measurements indicated that there was a minor general fading of all samples and some colour changes, although, in the judgment of the Client, the later did not translate into significant observable changes in the actual colour of the samples.

TEST PROCEDURE

UV Exposure Apparatus

The latest model Fluorescent Light Cabinet (QUV/spray) from Q-Panel was used to perform these tests in accordance with ASTM G 154 (see Reference)

A precise description of the test conditions is: QUV exposure, UV only at 50°C, UVB-313 lamps at 0.6 Watts/m² for 700 hours.

Specimens

One 300x75x6.4mm specimens of each veneer was supplied.

Colour Meter

A BYK - Gardner instrument was used to monitor changes in lightness (L*) and shifts from red to green (a*) and yellow to blue (b*). Because of the non-uniformity of the veneer patterns an average of 9 readings were taken for each specimen. However it would appear that this was still not enough to compensate for the natural colour variations in the specimens.

RESULTS AND DISCUSSION

It must be noted that the Colour Meter relies on the analysis of reflected light off a very small spot on the specimen, and therefore the results on veneers with large colour variations, such as dark grains, are very variable (e.g. Sandblasted Walnut). This is despite the fact that the results represent the average of 9 readings per sample. Therefore it is recommended that in some cases it may be best to use a visual comparison of exposed and non-exposed areas on the specimens, as well as the actual results of the colour measurements given in the attached Table.

**NEW AGE VENEERS: RESULTS OF COLOUR MEASUREMENTS
JUNE 2005 RESULTS**

L* = Lightness scale with 100 being White
a* = + Red to – Green
b* = + Yellow to – Blue

UVB 313 Lamps (outdoor exposure to sunlight)

	Sandblasted Antique Oak			Sandblasted Brindle Oak			Sandblasted Walnut		
Hours	L*	a*	b*	L*	a*	b*	L*	a*	b*
0	69.98	3.91	10.93	23.07	2.07	2.07	30.24	2.50	7.00
314	70.76	3.03	10.62	24.12	2.90	3.94	33.30	3.84	9.84
700	79.98	2.59	11.80	27.20	3.74	6.06	33.76	4.27	10.69
	Sandblasted Wenge Crown			Sandblasted Nabone			Sandblasted Sable Oak		
Hours	L*	a*	b*	L*	a*	b*	L*	a*	b*
0	26.70	5.26	8.35	73.45	0.87	10.89	22.30	0.70	0.35
314	22.84	6.18	10.11	73.24	-0.63	12.86	24.95	1.83	0.86
700	28.05	6.09	11.62	73.04	-0.58	14.85	26.21	2.31	1.64

REFERENCE - ASTM G 154: "Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Non-metallic Materials", American Society for Testing and Materials, West Conshohocken, Pennsylvania, USA, 1990.