



Users Manual

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2. Important Dates

Table 1.1 Important Dates

| | First trial | Second Trial | Third Trial |
|---------------------------|--------------------|---------------------|--------------------|
| Last Orders | March 28 | June 30 | September 30 |
| Sample Sent | April 15 | July 15 | October 15 |
| Formaldehyde Tests | May 1 - 15 | August 1 - 15 | November 1 - 15 |
| Last Results | May 31 | August 31 | November 30 |
| Statistical Report | June 5 | September 5 | December 5 |

3. Sample Randomisation Procedure

1. Consecutive panels are taken from one production run.
2. The outside edge is removed from all panels.
3. The panels are cut into test-pieces.
4. One piece is taken (at random) from each panel to make a pack of test-pieces.

4. General Instructions

For all tests follow the instructions given in the international standards listed in the following tables.

Where there are options within the standard, there are questions in the return form – which cover these points.

Table 3.1 Mechanical Test Standards

| Mechanical Test Standards | Type | Number Tests | Standards |
|--------------------------------------|------|--------------|---------------------|
| Thickness Swell - 24 hour @20°C | MDF | 10 | EN AS/NZS JIS |
| MOR & MOE – thick panel | MDF | 10 | EN AS/NZS JIS |
| MOR & MOE – thick panel | PB | 10 | EN AS/NZS JIS |
| MOR & MOE – thin panel | MDF | 10 | EN AS/NZS JIS |
| Internal Bond Strength - thick panel | MDF | 10 | EN AS/NZS JIS |
| Internal Bond Strength - thick panel | PB | 10 | EN AS/NZS JIS |
| Internal Bond Strength - thin panel | MDF | 10 | EN AS/NZS JIS |
| Screw Pull | MDF | 10 | JIS |
| Screw Pull | MDF | 10 | AS/NZS 2004 |
| Screw Pull | MDF | 10 | EN |
| Surface Soundness | MDF | 10 | EN AS/NZS |
| V313 Cyclic Test | MDF | 10 | EN AS/NZS |
| Dimensional Change With RH | MDF | 10 | EN |
| Dimensional Change With RH | MDF | 10 | AS/NZS 2004 |
| Surface Water Absorption | MDF | 10 | AS/NZS |
| Glue Bond Durability | MDF | 10 | AS/NZS 10 |
| Thickness Stability and Glue Bond | MDF | 10 | AS/NZS 9 |
| Density and Moisture | MDF | 10 | EN AS/NZS JIS |

Table 3.2 Formaldehyde Test Standards

| Formaldehyde Test Standards | Type | # Tests | Standard |
|--------------------------------------|-------------|----------------|----------------------------|
| Chamber EN717-1 - med' emission | MDF | 1 | EN717-1 |
| Chamber EN717-1 - low emission | MDF | 1 | |
| Chamber EN717-1 - med' emission | PB | 1 | |
| Gas Analysis - medium emission | MDF | 2 | EN717-2 |
| Gas Analysis - low emission | MDF | 2 | |
| Gas Analysis - medium emission | PB | 2 | |
| Flask - medium emission | MDF | 5* | EN717-3 |
| Flask - low emission | MDF | 5* | |
| Flask - medium emission | PB | 5* | |
| Perforator - medium emission | MDF | 2 | EN120 |
| Perforator - low emission | MDF | 2 | |
| Perforator - medium emission | PB | 2 | |
| Japanese Desiccator - med' emission | MDF | 5 | JISA 1460 AS/NZS4266:16 |
| Japanese Desiccator - low emission | MDF | 5 | |
| Japanese Desiccator - med' emission | PB | 5 | |
| Japanese Desiccator - med' emission | Ply | 5 | JAS 232 |
| Japanese Desiccator - low emission | Ply | 5 | |
| Japanese Desiccator - med' emission | Ply | 5 | |
| Japanese 40L Chamber - med' emission | MDF | 5 | JAS SE10 |
| Japanese 40L Chamber - low emission | MDF | 5 | |
| Japanese 40L Chamber - med' emission | PB | 5 | |
| FLEC - medium emission | MDF | 2 | FLEC |
| FLEC - low emission | MDF | 2 | |
| FLEC - medium emission | PB | 2 | |
| DMC - medium emission | MDF | 2 | DMC |
| DMC - low emission | MDF | 2 | |
| DMC - medium emission | PB | 2 | |
| ASTM Desiccator - med' emission | MDF | 5 | ASTM D5582 |
| ASTM Desiccator - low emission | MDF | 5 | |
| ASTM Desiccator - med' emission | PB | 5 | |

5. Instructions for Formaldehyde Testing

Test Dates for Emission Samples

Cut and condition (if applicable) and test samples over the period given in "Table 1.1 Important Dates".

JAS 232 2003 Plywood (Japanese Desiccator)

For the plywood test, MDF or particleboard samples have been used because composite products are more uniform than plywood.

1. Remove the outside edge of the samples.
2. Cut the sample into 150*50mm test-pieces.
3. Mix all the test-pieces.
4. Take five sets of 10 test-pieces.
5. Place in plastic bags and seal.
6. Condition at 20°C for 24±2hours.
7. Test according to the standards.
8. Carry out **FIVE** tests.

JISA 1460 2001 and AS/NZS 4266:16 2004 (Japanese Desiccator)

1. Remove the outside edge of the samples.
2. Cut the sample into 150*50mm test-pieces.
3. Mix all the test-pieces.
4. Take five sets of test-pieces (number of test-pieces as specified in the standards).
5. Condition according to your normal procedure.
6. Test according to the standards.
7. Carry out **FIVE** tests.

JAS 235 2003 and LVL JAS 236 (JAS 40L Chamber Test)

For the JAS 40L chamber tests, MDF (or PB) samples have been used because MDF (or PB) is more homogenous than glulam and LVL.

1. Use the samples as provided.
2. **DO NOT SEAL THE EDGES OF THE SAMPLES**
3. Remove from packaging and place in plastic bags and seal.
4. Condition at 20°C for 24±2hours.
5. Put two test-pieces in each of five chambers – lying flat on the grid.
6. Carry out **FIVE** tests.
7. Use an empty chamber and subtract the value from this chamber (blank) from the total.

EN120 (Perforator)

1. Remove the outside edges of the samples.
2. Cut the sample into 25*25mm test-pieces.
3. Mix all the test-pieces.
4. Condition the cut samples to constant mass as per the instruction in the standard.
5. Test according to the standards.
6. Carry out **TWO** tests.
7. The test results entered must be corrected to the estimated 6.5% value according to the formula given in EN622-1.
8. The question – “Average result before M.C. refers to the result before the correction in 622.1.

EN717-2 (Gas Analysis)

1. Testing should take place on the dates specified in the Table “Important dates” .Place the test-pieces in the CLOSED plastic bags in the conditioning room at 20°C. The samples MUST remain at the same moisture content. Do not open the bags until just before testing.
2. Just before testing, open the bags, seal the edges of the samples to be.
3. Keep the forth sample for moisture content - without edge-seal in a separate closed plastic bag.
4. Test **TWO** samples by your normal procedure.
5. Follow EN717-2 regarding the criteria for testing and reporting the third sample.
6. Measure the moisture content of the forth sample (if required)

EN717-1 (Chamber)

1. Open the pack of samples.
2. If the samples are not cut to size - cut some material from EACH of samples to give the correct area.
3. Seal the test-piece edges as per EN717-1.
4. Test according to EN717-1.
5. Carry out **ONE** test.

6. LabCheck Online Statistics

1. Analysis is to ISO 5725-2.
2. Final statistical analysis is not available until a trial is completed. After that date no more results can be entered.
3. Final analysis also produces the "Reproducibility" & "Repeatability" figures as shown on the Trial "Results" report.
4. The analysis includes the detection of statistical "outliers" and "stragglers". There are two outlier analyses performed:
 - 4.1. Cochran's Test which detects stragglers and outliers based on variances.
 - 4.2. Grubb's test which detects laboratories with outlying averages.
5. There are two different ways in which LabCheck makes use of the outlier analyses:
 - 5.1. For the Mandel's Charts & Reproducibility / Repeatability statistics, the analysis removes the outliers – which are not used in any other calculations.
 - 5.2. The system also uses the outlier analysis to identify outliers & stragglers for the "Results All Labs" report. For this report the outliers are identified – but not removed from the "Grand Mean". If a laboratory cannot see their result in the Mandel's charts it will be identified as an outlier in the "Results All Labs" report.
6. Regarding outlier analysis:
 - 6.1. The outlier analysis only removes a maximum of 3 labs for a given test.
 - 6.2. Cochran's test is performed first, and may remove the laboratory with the worst test result variance. The system does not repeat this process to look for further outliers after removing the worst laboratory.
 - 6.3. Grubb's test is performed after the Cochran test and may remove the laboratory with the lowest mean, and/or the laboratory with the highest mean. Once again the system does not repeat the process to remove more laboratories.
 - 6.4. Outlier analysis is not performed prior to the analysis for the "Chart All Labs" report. If the user cannot see their lab result on that page it is due to the result being beyond the boundaries of the upper or lower limit of the "Y" axis of the chart.
 - 6.5. Outlier analysis is not performed prior to display of a "Chart Test History" report. For this reason the grand mean of all results may be influenced by extreme results.

7. Questionnaire – Formaldehyde Tests

Record your final answers online in the LabCheck web site.

Use the following formats for your answers.

| JAPANESE DESICCATOR | Units | Example |
|--|------------------|------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned after cutting test-pieces | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| The inside diameter of the crystallising dish | mm | 115 |
| The volume of the desiccator – including lid | Litres | 11 |
| Height of the samples above top of water | mm | 55 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| JAS 40L CHAMBER | Units | Example |
|--|------------------|------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned after cutting test-pieces | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Samples were conditioned in plastic bags | Yes/No | Yes |
| Samples were end sealed with (labcheck trials are normally unsealed) | Tape/Not Sealed | Not Sealed |
| Height of the samples above top of water | mm | 55 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| 717-1 CHAMBER TEST EN | Units | Example |
|----------------------------|------------------|----------------|
| Test Standard used | Select from list | Europe |
| Chamber volume | Litres | 1000 or 225 |
| Days in Chamber | Days | 10 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| 717-2 GAS ANALYSIS EN | Units | Example |
|---|-----------------------|------------------|
| Test Standard used | Select from list | Europe |
| Number of days samples were conditioned after cutting. | Days/Days | 1/7 |
| Conditioning environment | RH/°C | 65/20 |
| Samples were conditioned in bag. | Yes/No | Yes |
| If you tested a third sample and discarded one result – what result was discarded. | mg/m ² /hr | 2.1 |
| What is the cell length and calibration factor for the spectro' | mm / mg/mL | 50/ 0.00265 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |
| Face taped?/ Corrected? – do you tape onto the face, if do you tape the face do you correct the surface area to account for the taped face. | Yes/No | Yes/Yes Or No |

| EN717-3 FLASK | Units | Example |
|---|------------------|------------|
| Test Standard used | Select from list | Europe |
| Number of days samples were conditioned <i>before</i> cutting test-pieces | Days | 5 |
| Number of days samples were conditioned <i>after</i> cutting test-pieces | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| EN120 PERFORATOR TEST | Units | Example |
|--|------------------|------------|
| Test Standard used | Select from list | Europe |
| Number of days samples were conditioned <i>after</i> cutting test-pieces | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Average moisture content | % | 7 |
| Average result before M.C correction | mg/100g O.D. | 6.9 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

8. Questionnaire – Mechanical Tests

Record your final answers online in the LabCheck web site.

Use the following formats for your answers.

| MOR & MOE | Units | Example |
|---|------------------|----------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned for | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Test Span | mm | 210 |
| Rate of loading | mm/min | 15 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| SURFACE SOUNDNESS | Units | Example |
|---|------------------|----------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned for | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Rate of loading | mm/min | 15 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| SURFACE WATER ABSORPTION | Units | Example |
|---|------------------|----------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned for | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| 24HR 20 °C THICKNESS SWELL | Units | Example |
|---|------------------|----------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned for | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Diameter of micrometer | mm | 4 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| V313 – CYCLE TEST – 24HR 20 °C THICKNESS SWELL | Units | Example |
|---|--------------|----------------|
| Same questions as for 24hr Thickness Swell | | |

| V313 – CYCLE TEST – INTERNAL BOND | Units | Example |
|--|--------------|----------------|
| Same questions as for Internal Bond | | |

| SCREW PULL TEST | Units | Example |
|---|------------------|------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned for | Days | 7 |
| Conditioning environment | RH/°C | 65/20 |
| Rate of loading | mm/min | 15 |
| Screw Pitch | mm | 4 |
| Shank Diameter | mm | 5 |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |

| INTERNAL BOND | Units | Example |
|---|------------------|------------|
| Test Standard used | Select from list | AS/NZS |
| Number of days samples were conditioned before gluing / Number of days samples were conditioned after gluing. | Days/Days | 7/1 |
| Conditioning environment | RH/°C | 65/20 |
| Rate of loading | mm/min | 15 |
| Blocks were Wood/Aluminum/Steel | Wood/Alum/Steel | Alum |
| Glue Type | Hot Melt/Epoxy | Hot Melt |
| Test dates | dd/mm/yyyy | 01/05/2006 |
| Operator / Instrument Code | ##/## | 05/09 |