



# **Specific Accreditation Criteria**

## **ISO/IEC 17025 Application Document Manufactured Goods - Annex**

### **Testing of paper and related products**

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## Testing of paper and related products

This document provides interpretative criteria and recommendations for the application of ISO/IEC 17025 for both applicant and accredited facilities conducting testing of paper and related products.

Applicant and accredited facilities must comply with all relevant documents in the NATA Accreditation Criteria (NAC) package for Manufactured Goods (refer to NATA Procedures for Accreditation).

The clause numbers in this document follow those of ISO/IEC 17025 but since not all clauses require interpretation the numbering may not be consecutive.

### 6 Resource requirements

#### 6.4 Equipment

##### 6.4.7 & 6.4.10

##### Common equipment performance checks

Facilities must ensure that where methods writing bodies have included equipment calibration and checking intervals in standard methods that these intervals must be followed.

Facilities should refer to NATA's *General Accreditation Guidance: General Equipment - Calibration and Checks, General Equipment Table* for further information.

The following supplementary information pertains to equipment items having specific application to testing of paper and related products.

| Item of equipment  | Calibration interval (years) | Checking interval (months) | Procedures and references       |
|--------------------|------------------------------|----------------------------|---------------------------------|
| Autotitrator       |                              | 12                         | Volume delivered.               |
| Bending resistance | 2                            |                            | Load cell calibration.          |
|                    | 2                            |                            | Check value.                    |
|                    | 2                            |                            | Bending angle.                  |
|                    | 2                            |                            | Bending speed.                  |
|                    | 2                            |                            | Bending length. AS/NZS 1301.453 |

| Item of equipment                         | Calibration interval (years) | Checking interval (months) | Procedures and references  |
|---|------------------------------|----------------------------|--|
| <b>Bendtsen porosity roughness tester</b> | 5,000 to 10,000 tests        |                            | Roughness head.<br>Manostat weights.<br>Roughness jig.<br>AS/NZS 1301.439 and 440.   |
| <b>Burst tester</b>                       | 1                            |                            | Pressure transducer calibration.   |
|   | 2                            |                            | Pumping rate.  |
|   |                              | 3                          | Diaphragm height test AS/NZS 1301.403.   |
|   |                              | 6                          | Check at zero and one point against a gauge block or length bar and record results.<br>Inspect anvils.<br>If the gauge block or length bar is not externally calibrated check it immediately after callipers are calibrated and use for the six-monthly check. |
| <b>Centrifuge</b>                         | 2                            |                            | Rotational frequency.  |
| <b>Die cutter</b>                         | 2                            |                            | Paper dimension checks.  |
|   |                              | 6                          | Visual check for wear.   |
| <b>Freeness tester</b>                    | 2                            |                            | Bottom orifice flow rate.<br>Screen plate calibration. AS/NZS 1301.206.  |
| <b>Guillotine</b>                         |                              | 12                         | Tensile paper width.   |
|   |                              | 12                         | Tear paper dimensions.<br>AS/NZS 1301.448 and AS/NZS 1301.400.   |
| <b>Hand sheet press</b>                   | 2                            |                            | Pressure gauge. AS/NZS 1301.214  |
|   |                              | 12                         | 1st press time to pressure.  |

| Item of equipment             | Calibration interval (years) | Checking interval (months) | Procedures and references  |
|-------------------------------|------------------------------|----------------------------|--|
|                               |                              | 12                         | 2nd press time to pressure.  |
|                               |                              | 12                         | 2nd press time at pressure. AS/NZS 1301.203  |
| <b>Hot plate</b>              |                              | 5 years                    | Surface temperature.   |
| <b>Kajaani fibre analyser</b> |                              | 3                          | Rayon check.   |
| <b>Laboratory blotter</b>     |                              | Each batch                 | Klemm absorbency. Water uptake. Grammage. Thickness. Dimensional stability. AS/NZS 1301.214. |
| <b>PFI mill</b>               | 2                            |                            | Rotational frequency.  |
|                               |                              |                            | Peripheral speed. AS/NZS 1301.209  |
| <b>Porosimeter</b>            | 2                            |                            |  |
|                               |                              | Each use                   | Check value. AS/NZS 1301.447.  |
| <b>Pulp disintegrator</b>     |                              | 12                         | Rotational frequency – against counter.  |
|                               |                              | 24                         | Rotational frequency – against tachometer.   |
|                               |                              | 12                         | Blade pitch. AS/NZS 1301.214.  |
| <b>Pulping digester</b>       |                              | 1                          | Temperature probe check.   |
|                               |                              | 6                          | Temperature calibration.   |
| <b>Purified water system</b>  |                              | 1                          | Conductivity.  |
| <b>Roughness tester</b>       | 2                            |                            | Primary (air flow) calibration.  |
|                               |                              | Each use                   | Check value. AS 1301.441.  |
| <b>Sheet machines</b>         |                              | 12                         | Drainage time.   |

| Item of equipment        | Calibration interval (years) | Checking interval (months) | Procedures and references   |
|--------------------------|------------------------------|----------------------------|---|
|                          |                              | 12                         | Agitation time.   |
|                          |                              | 12                         | Dwell time.   |
|                          |                              | 12                         | Air couching time.  |
|                          |                              | 12                         | Air couching pressure.  |
|                          |                              | 24                         | AS 1301.203   |
| <b>Spectrophotometer</b> |                              | 3                          | Paper tabs.   |
|                          |                              | Each use                   | Black cup.  |
| <b>Stock divider</b>     |                              | 24                         | Volume check.   |
|                          |                              | 24                         | Grammage check.   |
| <b>Tear tester</b>       | 2                            |                            | Load cell calibration.  |
|                          | 2                            |                            | Pendulum friction.  |
|                          |                              | 12                         | Length of tear. AS/NZS 1301.400.  |
| <b>Wood chip screens</b> |                              | 12                         | Timer check, Vibration angle (where applicable), Screen aperture sizes. |

## 7 Process requirements

### 7.8 Reporting of results

#### 7.8.1 General

##### 7.8.1.2

##### Packaging items

Where wet or saturated items have been received for testing, the facility shall pre-condition these by drying to stable mass before conditioning as per the standard. The condition in which the items were received shall be reported.

Where replacement fill materials are used these shall be reported in full – dimensions, density, etc. Reports must also identify the printing upon fibreboard materials under test.

## References

This section lists publications referenced in this document. The year of publication is not included as it is expected that only current versions of the references shall be used.

### Standards

|                  |   |
|------------------|---|
| AS/NZS 1301.203s | Methods of test for pulp and paper - Forming handsheets for physical testing of pulp                                |
| AS/NZS 1301.206s | Methods of test for pulp and paper - Freeness of pulp   |
| AS/NZS 1301.209s | Methods of test for pulp and paper (metric units) - Laboratory processing of pulp - PFI mill method                 |
| AS/NZS 1301.214s | Methods of test for pulp and paper - Equipment for preparation of handsheets  |
| AS/NZS 1301.400s | Methods of test for pulp and paper - Tearing resistance of paper  |
| AS/NZS 1301.403s | Methods of test for pulp and paper - Bursting strength of paper   |
| AS/NZS 1301.426s | Methods of test for pulp and paper - Determination of thickness and apparent bulk density or apparent sheet density |
| AS 1301.439s     | Methods of test for pulp and paper - Bendtsen roughness of paper and paperboard                                     |
| AS 1301.440s     | Methods of test for pulp and paper - Bendtsen air permeance of paper and board                                      |
| AS/NZS 1301.441s | Methods of test for pulp and paper - Sheffield roughness of paper and board   |
| AS/NZS 1301.447s | Methods of test for pulp and paper - Sheffield air permeance of paper and board                                     |
| AS 1301.448s     | Methods of test for pulp and paper - Tensile strength of paper and paperboard (Constant rate of elongation method)  |
| AS/NZS 1301.453s | Methods of test for pulp and paper - Bending resistance of paper and board - Constant rate of deflection            |
| ISO/IEC 17025    | General requirements for the competence of testing and calibration laboratories                                     |

### NATA publications

NATA Accreditation Criteria (NAC) package for Manufactured Goods

General Accreditation Guidance

General Equipment - Calibration and Checks, General Equipment Table



## **Amendment Table**

The table below provides a summary of changes made to the document with this issue.

| <b>Section or Clause</b> | <b>Amendment</b>   |
|--------------------------|--|
| Whole document           | Clauses have been aligned with ISO/IEC 17025:2017.<br>No new interpretative criteria or recommendations have been included other than editorial changes. |