

RecyClass

RECYCLASS
RECOGNISED
TESTING FACILITIES

QUALITY MANAGEMENT
& PROCEDURES

TESTING EVALUATION PROTOCOLS

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DISCLAIMER

“RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste and establishing a harmonized approach toward recycled plastic calculation & traceability in Europe. The Recyclability Evaluation Protocols promote recyclability by encouraging the industry to test new plastic technologies, materials or products, providing recommendations on improving their recyclability before market launch.

The Recyclability Evaluation Protocols are freely available to download on the RecyClass website. Companies developing new plastic concepts are encouraged to use them to self-assess the impact of their solutions on recyclability and highlight potential issues. **However, compliance with a Recyclability Evaluation Protocol is not a replacement for an official assessment and may not be used as a marketing tool.** The RecyClass Steering Board, following the recommendations of the Technical Committees, will decide on the compatibility of the innovation with recycling according to the evaluation results, granting a Technology Approval Letter to the Applicant.

All tests must follow the Evaluation Protocols recommended by the RecyClass Technical Committees and be conducted by an independent laboratory recognised by RecyClass, which has no legal affiliation to the applicant.

More information is reported in the RecyClass Internal Procedures, available on the [RecyClass website](#).

1. INTRODUCTION

This document lays out requirements, qualifications, and conditions for Recognised Testing Facilities to conduct the RecyClass Testing Evaluation Protocols developed by RecyClass Technical Committees and Task Forces.

RecyClass Testing Evaluation Protocols refers to all the procedures listed here: <https://recyclass.eu/protocols-guidelines/testing-protocols/>.

This document provides guidance to ensure that Recognised Testing Facilities perform RecyClass Testing Evaluation Protocols in a consistent, reproducible, and independent manner ensuring the integrity of the RecyClass Technology Approval and test campaigns processes and laboratory results judgement. Testing Facilities refer to Laboratories in charge of the Recyclability Evaluation Protocols, and Sorting Plants in charge of the Sorting Evaluation Protocol for Plastic Packaging.

2. PROTOCOLS DEVELOPMENT & MAINTENANCE

RecyClass Testing Evaluation Protocols are owned, managed, and developed by RecyClass who ensures adequate documentation for the maintenance and improvement of the protocols.

RecyClass experts regularly review all available documentation including the protocols, Testing Facility report templates, and quality management systems and procedures according to recent developments in the recycling industry and the results of Testing Facility testing. Any changes and updates are implemented by the RecyClass Technical Committees and/or Task Forces and approved by the RecyClass Packaging and Automotive & Electrical and Electronic Equipment Steering Boards (SBs) which are all composed by players representing the entire plastic value chain (raw material producers, converters, retailers, brand owners, machine manufacturers, recyclers, OEMs, etc.) as laid out in the document “RecyClass Internal Procedures”. New updates are communicated to all Recognised Testing Facilities via their main contact.

A non-exhaustive list of cases where changes to protocols documentation might be found below:

- Changes to relevant European sorting and recycling practices under the focus and scope of the protocols. Updates will need to be reflected in the Testing Facility documentation.
- Changes in the focus and /or scope of the RecyClass protocols by the RecyClass SBs.
- Repeated feedback from the Testing Facilities following their experience during the testing and completion of the facility report. Frequent valuable comments will be taken to the Technical Committees and Task Forces for consideration to revise the protocol's documentation.
- Stakeholders' feedback and proposals from RecyClass members and supporters. If valuable and relevant to the protocol's focus and scope, they will be submitted to the Technical Committees and Task Forces for consideration.

RecyClass considers and records all proposals to the Testing Evaluation Protocols and assesses their suitability within the testing scope. Suitable feedback is included in the respective documentation during the review. Reviewed documents are consulted with Recognised Testing Facilities and members to ensure the suitability and fitness of the added requirements or procedures. The RecyClass SBs approve the final version of the documents for publication.

3. USE OF OFFICIAL DOCUMENTATION

RecyClass Testing Evaluation Protocols are published in English on the RecyClass website. Recognised Testing Facilities must use the latest and official RecyClass document to conduct the protocols and to deliver the report to the applicant in English.

The report might be amended by both the applicant and RecyClass in case of necessity and to bring clarity in the results. Additional tests might be added as well if required by the RecyClass Technical Committees and/or Task Forces.

Each report includes specific information and pictures related to a plastic product's design and its innovation. Control material, process conditions and results are detailed. Observations and pictures should be included as well to illustrate the tests. Additionally, the reports should follow the steps' order of the testing protocols to ensure clarity and facilitate the review by RecyClass. Reports for Technology Approvals should be anonymised with only reference to the Application Code. Moreover, pictures enabling to identify the tested samples should be blurred.

4. TESTING FACILITIES

RecyClass Testing Evaluation Protocols are performed by Recognised Testing Facilities, duly represented by a recognised representative who operates according to the procedures and the requirements described in this document, as well as to the terms of the Cooperation Agreement.

Communication between Testing Facilities and RecyClass must be kept on a regular basis. Testing Facilities must communicate to RecyClass any new applications for the protocols and the status of ongoing applications. For the Recyclability Evaluation Protocols, RecyClass Team in accordance with the Technical Committee representatives, will guide the Laboratories and the applicants in defining the control sample and the testing conditions through a Letter of Agreement communicated to the Applicant after the decision of the representatives. Testing according to the Recyclability Evaluation Protocols cannot start without a Letter of Agreement delivered by RecyClass Team. In the case that testing started prior to receiving a Letter of Agreement, RecyClass reserves the right to not accept the application, or to ask to retest the innovation.

RecyClass Team provides to the Testing Facilities a dedicated online platform, where the Testing Facilities can track all Technology Approvals applications, provide testing status, and deliver final reports. RecyClass Team uses the platform as well to update the Testing Facilities on the latest developments, documents, and protocol versions.

RecyClass Team organises workshops to align views among the Testing Facilities and communicate new developments on the protocols.

RecyClass Team is authorised to follow Testing Evaluation Protocols in the Recognised Testing Facilities after informing the Recognised Testing Facility minimum 2 weeks in advance.

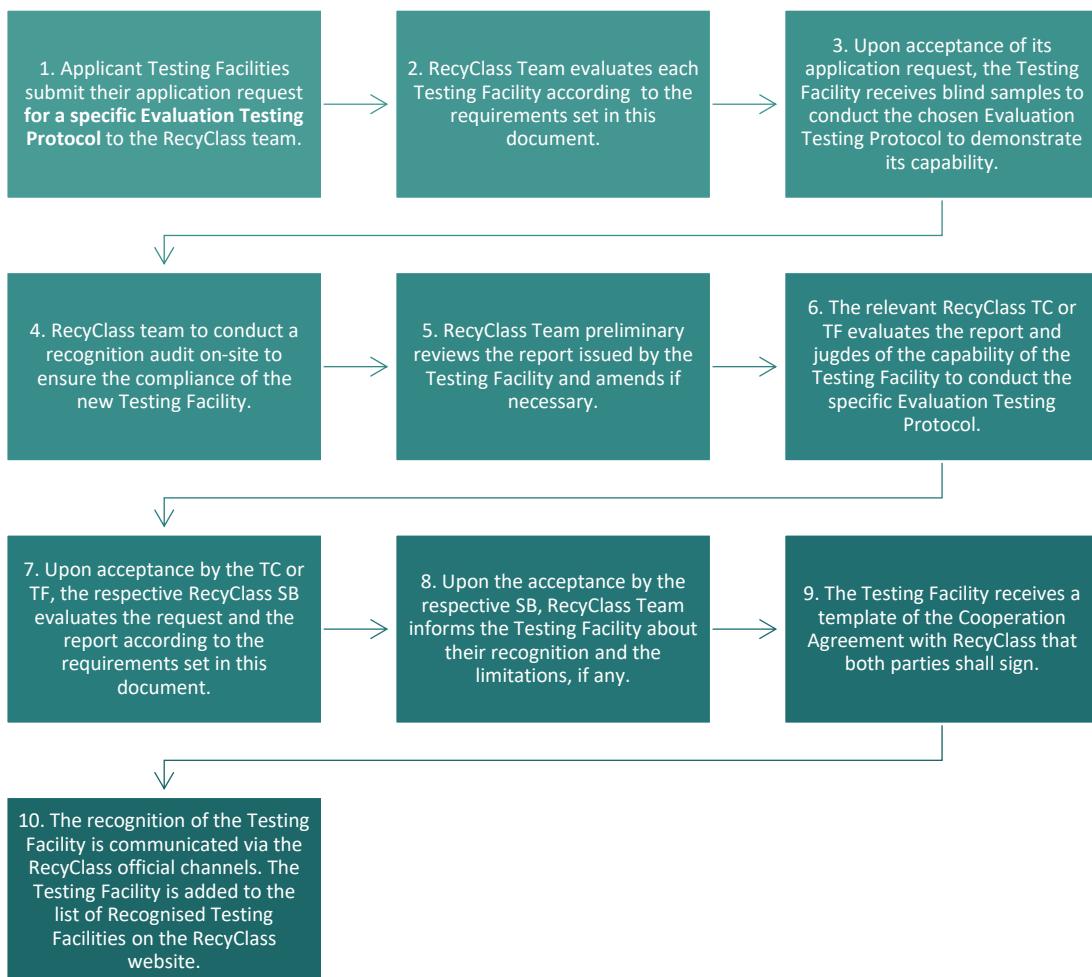
4.1 RECOGNITION OF TESTING FACILITIES: PROCEDURE

RecyClass defined a standard procedure to recognise Testing Facilities, ensuring transparency and equality between all Testing Facilities. The procedure aims, as well, to guarantee repeatable testing results in each Testing Facility, recognising that the choice of the Testing Facility will not affect the final decision of the RecyClass Technical Committees regarding the plastic product recyclability.

The figure below illustrates the recognition procedure for Testing Facilities applying to RecyClass.

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Figure 1: Procedure of Testing Facilities recognition



For Sorting Facilities, the recognition will be issued only for the site where the tests were performed. The recognition for sorting facilities can cover the entire Sorting Evaluation Protocol for Plastic Packaging (i.e., full protocol), or only part of it, with limitations for the tests, as described in the Sorting Evaluation Protocol¹.

The RecyClass team must visit the Testing Facility to ensure its compliance with the requirements set in section 4.2. The audit will be conducted according to section 4.3.

Any change within the Testing Facility that would lead to non-compliance with the Cooperation Agreement and/or the requirements set forth in this document must be communicated to the respective RecyClass SB, who will reevaluate the recognition of the Testing Facility.

The Testing Facility must conduct, at its own expense, the Testing Evaluation Protocol to demonstrate its ability and get recognised. This requirement applies to both new Testing Facilities and already Recognised Testing Facilities willing to extend their scope.

¹ [Sorting Evaluation Protocol for Plastic Packaging](#)

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An up-to-date list of all Testing Facilities Recognised to perform RecyClass Testing Evaluation Protocols is available on the website.

4.2 TESTING FACILITIES APPLICATION REQUIREMENTS

4.2.1 TESTING FACILITIES MINIMAL REQUIREMENTS

Testing Facilities must comply with the following requirements after applying to become a Recognised Testing Facility:

- Testing Facilities must be legal entities or defined as part of a legal entity.
- Testing Facilities must be competent organisations with demonstrated references in the field of plastic products recyclability, as well as plastic processing and analysis.
- Testing Facilities must have mechanisms in place to ensure impartiality of the organisation during the performance of their activities.
- Testing Facilities must have financial stability and must possess insurance or reserves to cover any liabilities arising from its operations.

4.2.2 TESTING FACILITIES OPERATIONAL REQUIREMENTS & RESPONSIBILITIES

- Testing Facilities must have a quality management system in place which ensures compliance with the requirements laid down in this document. Procedures to identify and manage any non-conformities detected must be included, along with a procedure to implement corrective actions.
- Testing Facilities are responsible for the competence and performance of their operators. Testing Facilities must have in place mechanisms to ensure the competence of all operators.
- Testing Facilities must attend the RecyClass Workshop organised annually, where any new requirements or recent developments related to the protocols are discussed.
- Testing Facilities procedures and operations must be non-discriminatory, and applicants should not be refused for any reason which is not detailed in this document or in the document “Technology Approval Process – Procedures and Quality Management”².
- Testing Facilities must ensure protocols are conducted using the latest and official version of the RecyClass Testing Evaluation Protocols and refer to the corresponding version in the report.
- Testing Facilities must appoint a lead operator who will act as a contact person between RecyClass and the Testing Facilities, ensuring smooth communication between both organisations related to quality management, new applications, and applicants.
- Testing Facilities shall accompany companies during the approval process with RecyClass (e.g., participation in the RecyClass meetings, support in understanding the lab results).
- Testing Facilities must deliver reports within the timing established on the signed quotation and according to RecyClass quality standards.

² *Technology Approvals – Procedures and Quality Management*

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- Testing Facilities shall upload the recyclability and sorting evaluation report, as well as the data presented in the report, within the RecyClass online platform when the tests are finalised.

4.2.3 TESTING FACILITIES TECHNICAL REQUIREMENTS

To ensure a uniformly high standard of RecyClass protocols, Testing Facilities must meet the following requirements listed below.

- Technical knowledge about chemistry and physical properties of polymers.
- Technical knowledge about packaging, automotive & EEE plastic parts' construction.
- Good understanding of the functioning of plastic recycling processes relevant to the RecyClass Testing Evaluation Protocols.
- Above-average knowledge of the main technical challenges for plastics recycling.
- Above-average knowledge of the main technical challenges for the sorting of plastics when applicable.
- Demonstrated competence by submitting proper documentation (e.g., CV, copies of certificates of all relevant academic and professional qualifications, work experience and experience as an expert, references, reports, and training).
- Demonstration of sufficient practical experience in the field of activity and the scope of expertise.
- Testing Facilities must be provided and have access to all the necessary equipment to run the entire Protocol and strictly follow the Testing Evaluation Protocols, for which the Testing Facility is applying (e.g., test standards required, adequate lab equipment to cover all steps of the protocol(s), repeatable testing conditions, stockage area for samples).
- Testing Facilities must ensure that all protocols are executed independently and are not influenced or constrained by external instructions.
- Testing Facilities must share all necessary information to ensure the complete and correct interpretation of the results.
- In the process of drafting the technical report for submission to RecyClass and Applicants, Testing Facilities are required to designate writers, validators, and approvers (three-step validation) to ensure thorough verification before final submission.

4.2.4 REQUIREMENTS SPECIFIC TO LABORATORIES

The following requirements are specific to laboratories performing Recyclability Tests to ensure reliability and repeatability of the results, as well as good coordination with the RecyClass Team.

- Testing Facilities must be ISO 17025 or ISO 9001 certified. Certification according to ISO 17025 is preferred.
- Testing Facilities must inform the RecyClass team monthly about the status of the ongoing tests they are managing.

4.2.5 REQUIREMENTS SPECIFIC TO SORTING FACILITIES

The following requirements are specific to sorting facilities, to ensure a high standard of RecyClass protocols and certifications, as well as good coordination with the RecyClass Team.

- Testing Facilities must share with RecyClass any certifications obtained for available standards meant to improve their processes and quality of the results.

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- Testing Facilities are advised to be ISO 9001.
- If requested by RecyClass, Testing Facilities must inform the RecyClass team about the status of the ongoing tests they are managing.

4.2.6 WORKSHOP & AUDIT FEE

To cover the cost of the monitoring audit and the RecyClass workshop, RecyClass Recognised Testing Facilities must pay a 1000 € annual fee to RecyClass. The annual fee is invoiced starting from January of the year following recognition. If a surprise audit is necessary due to non-conformities (see section 4.6.), an additional fee of 500 € will be charged to the Testing Facility to cover travel and accommodation of the RecyClass team conducting the audit.

4.2.7 TESTING FACILITIES IMPARTIALITY

Testing Facilities must be independent and impartial organisations, with no conflict of interest with the applicant of a RecyClass protocol.

Testing Facilities must have mechanisms in place to identify and eliminate or minimise any risks to impartiality. Any risks must be communicated to RecyClass, who will determine if the measures implemented are sufficient to continue operating as a Recognised Testing Facility.

Where the Testing Facility is a part of a legal entity, it must ensure that separate activities do not compromise the independence of the protocols.

4.2.8 CONTROL & VIRGIN MATERIALS SUPPLIES

Testing Facilities must regularly inform RecyClass about their stock of control and virgin resins to be used for recyclability and sorting evaluations. The reporting aims at ensuring continuity of testing; therefore, Testing Facilities are expected to properly monitor the availability of the control material stocks to prevent delays in the recyclability evaluations.

When new resins need to be ordered, the Testing Facilities can either (1) order them directly, or (2) ask RecyClass to contact the raw material suppliers. For the latter case, RecyClass will order the resins with the agreement of the Testing Facilities and directly ship them to the Testing Facilities. If RecyClass pays the raw material producer, the Testing Facilities must refund RecyClass.

4.2.9 RECOGNITION & MONITORING OF TESTING FACILITIES

Recognised Testing Facilities must deliver high-quality technical reports for each recyclability evaluation performed. These high-quality standards are presented in the Guidance Document for Testing and Reporting circulated to Testing Facilities.

The RecyClass team constantly performs quality controls on new reports received from Testing Facilities. RecyClass reserves the right to ask for modifications before submission to the corresponding Technical Committee. These modifications must not change the outcome of the test nor the results presented, except for evidence of typos.

This review will cover the following topics:

- Quality of the report
- Quality of the pictures
- Objectivity
- Respect and promptness of corrections.

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- Deviations to testing protocols.
- Compliance with the delivery time.

This will lead to an average rating of the quality of the reports during the monitoring audit. In the case of a rating below average, RecyClass will consider this control as a non-conformity as reported on section 4.6. The conditions for the evaluation are reported in the Audit Checklist for RecyClass Recognised Testing Facilities.

4.2.10 RECOGNITION AUDIT

During the recognition process, the Recognised Testing Facility will need to perform a full Testing Evaluation Protocol to ensure the reliability and alignment between all the Recognised Testing Facilities. The RecyClass team will audit the facility, preferably during the testing. This audit is mandatory to officialise the recognition of the Testing Facilities, unless the Testing Facility has already been previously recognised for other RecyClass protocols. the RecyClass team will inform the Recognised Testing Facility at least 2 weeks in advance the recognition audit. For recognition audits, an agenda must be defined by both RecyClass and the Testing Facility under recognition to cover all parameters to be audited. The recognition audit evaluates the following topics:

- Compliance with the testing procedures
- Management of the recognition test
- Testing equipment
- Organisation of the working space & safety
- Laboratory report quality of the recognition test (according to 4.3.1.)
- Validity of ISO standards

The result of the audit will not depend on the results of the testing performed. RecyClass will contact the Testing Facility within 2 months after the audit or reception of the report, whichever comes last, to present the audit outcomes and the decision from the RecyClass SBs about the recognition of the Testing Facility, which in case of positive assessment will last for 2 years. An audit leading to a rejection by the RecyClass SBs will be considered as a non-conformity and will not lead to the recognition. A completely new audit will be necessary to lead to a positive outcome. The conditions for the evaluation are reported in the Audit Checklist for RecyClass Recognised Testing Facilities.

4.2.11 MONITORING AUDIT

Every 2 years, the Recognised Testing Facility will need to be audited by RecyClass to ensure the reliability and alignment between all the Recognised Testing Facilities. This audit is mandatory to maintain the recognition of the Testing Facilities. As referred in section 4, the RecyClass team needs to inform the Recognised Testing Facility at least 2 weeks in advance the monitoring audit. The audit must take place anytime between 3 months before and 3 months after the recognition period ends. For the monitoring audits, an agenda must be defined by both RecyClass and the recognised Testing Facility to cover all parameters to be audited. The monitoring audit evaluates the following topics:

- Compliance with the testing procedures
- Management of the application/test
- Testing equipment
- Organisation of the working space & safety
- Laboratory report quality (related to 4.3.1.)
- Validity of ISO standards

The result of the audit will not depend on the results of the testing performed. RecyClass will contact the Testing Facility within 2 months after the audit to present the outcomes of the audit and the decision from RecyClass SBs about the extension of the recognition for 2 years in case of a positive assessment. An audit leading to a rejection by the RecyClass SBs will be considered as a non-conformity and will not lead to the extension of the recognition. A completely new audit will be necessary to lead to a positive outcome. The conditions for the evaluation are reported in the Audit Checklist for RecyClass Recognised Testing Facilities.

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4.2.12 SURPRISE AUDITS

In the case of non-conformity reported according to section 4.6., RecyClass reserves the right to conduct a surprise audit without informing the Testing Facility in advance. This audit cannot be considered to extend the recognition of the Testing Facility for 2 years. An audit report will be issued within 2 weeks after the audit to present the audit outcomes. This audit will focus on several topics as listed in section 4.3.2. In the case of a negative audit outcome, RecyClass will consider the audit as a non-conformity, which may start a dossier of non-conformity that will be addressed to the RecyClass SBs (see section 4.6.). The conditions for the evaluation are reported in the Audit Checklist for RecyClass Recognised Testing Facilities.

4.3 FREE COMPETITION AMONG TESTING FACILITIES

Companies that apply to a RecyClass Testing Evaluation Protocol may freely contract any Testing Facility listed on the RecyClass website. Applicants may also choose to change from one Testing Facility to another to perform a new protocol.

Regarding the RecyClass internal test campaigns quoted above 5 000€, RecyClass must contact all Testing Facilities recognised for the corresponding testing protocol to obtain quotations and give them at least 2 weeks to provide quotations. If only 1 quotation is received by the deadline, RecyClass can decide to make a second call for quotations. RecyClass can also consider attributing the test campaign to a Testing Facility willing to be recognised for the specific testing procedure (Test carried out at the expense of the Testing Facility cf. Section 4.1).

For tests representing less than 5000€, RecyClass can decide to assign the trials directly to any Testing Facility recognised for the corresponding testing procedure.

4.4 RECYCLASS' TEST CAMPAIGNS MANAGEMENT

Testing Facilities in charge of managing a RecyClass test campaign must operate according to the conditions shared by RecyClass and must share a timeline for the project with the RecyClass team. Any issues faced during the test campaign must be communicated as soon as possible to the RecyClass team. Any delay must be communicated to the RecyClass team well in advance and should only be related to equipment problems, staff issues, or delays in sample delivery. Unexplained delay or last-minute notice will be considered as a non-conformity with the RecyClass Testing Facilities requirements.

4.5 NON-CONFORMITIES & PENALTIES

4.5.1 NON-CONFORMITIES

Non-conformities will consist of the following non-exhaustive list:

- Reference to RecyClass on tests not authorised by RecyClass through a Letter of Agreement.
- Difference between the test performed and the information presented in the report.
- Multiple repeated mistakes on the report, despite the request from RecyClass to correct them.
- Non-respect of the confidentiality of the assessment.
- Refusal of the RecyClass audit.
- Testing Report Quality Control scored below average.
- Monitoring audit non-validation.
- Surprise audit scored below average.
- Conflict of interest reported.
- Workshop & Audit fee not paid for the current year.

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Even if not listed as non-conformities, repeated issues related to the content and statements of the recyclability evaluation reports can lead to the first level of penalty.

4.5.2 PENALTIES FOR NON-CONFORMITIES

The following penalties can be applied in the case of accumulation of non-conformities within a 2-years' time.

LEVEL OF PENALTY	NON-CONFORMITIES	PENALTY
1	In case of multiple issues reported, even if not-reported as non-conformities	Formal written warning
2	1	Potential surprise audit
3	2	Creation of a non-conformity dossier

4.5.3 BREACH OF THE COOPERATION AGREEMENT AND REMOVAL OF RECYCLASS' RECOGNITION OF TESTING FACILITIES

Any non-conformities or non-compliant behaviour of the Testing Facility should be communicated to RecyClass immediately, who will seek a solution for a period of 3 months.

If unsuccessful, RecyClass will present a dossier of non-conformities to the SBs, who will assess and evaluate the Testing Facility on a one-to-one basis. RecyClass reserves the right to remove the recognition of a Testing Facility or to terminate the Cooperation Agreement altogether between a Testing Facility and RecyClass upon the outcome of the Testing Facility evaluation. The Testing Facility will have 60 days to appeal to the SBs their decision.

5. DATA CONFIDENTIALITY

Recognised Testing Facilities must sign a Non-Disclosure Agreement with RecyClass to protect confidential information of innovative plastic products design tested according to the Testing Evaluation Protocols. RecyClass will provide the Testing Facilities with the NDA template.

DOCUMENT VERSION HISTORY

VERSION	PUBLICATION DATE	REVISION NOTES
2.1.3	February 2026	Clarification on requirements for Sorting Facilities Clarification of procedures and their application to Automotive & EEE protocols. Simplification of section on Recognition Audit
2.1.2	June 2025	Addition of precision for invoicing of fees & audit dates
2.1.1	April 2025	Recyclability Approvals renamed as Technology Approvals
2.1	April 2025	Modification of the monitoring audits (split into recognition and monitoring audits) Removal of Annex 1 and creation of a Audit Check List
2.0	April 2024	Addition of Workshop & Audit fee Addition of non-conformities & penalty section Addition of Testing Report Quality Control Addition of mandatory on-site audit for recognition of a laboratory Addition of surprise audits Addition of designate writers, validators, and approvers for technical report validation Addition of risks for performing tests without Letter of Agreements Addition of Annex 1
1.3	January 2024	Specifications for Laboratories and Sorting Facilities Clarification on the free-of-charge recognition test Extension of the document to PET protocols Addition of a section on test campaign call for bids Addition of RecyClass test campaign section
1.2	August 2022	Addition of section 4.2.5 “Control & Virgin Materials Supplies”
1.1	May 2022	Recognised replaces Accredited Document extended to all Testing Facilities (sorting lines + laboratories) Addition of the Letter of Agreement Addition of the Recognition Monitoring section
1.0	September 2021	Release of the first version of the Accredited Laboratories – Quality Management & Procedures

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