

Protocol

Sep I



Committee for Studying the Behaviour
of Packaging in Sorting Centres

PROTOCOL

Separation test



WWW.COCET.FR/EN/

To contact us:

<https://www.cocet.fr/en/contact-us/>



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Introduction

COCET

The mission of the Committee for Studying the Behaviour of Packaging in Sorting Centres (COCET) is to help designers and decision-makers develop household packaging that can be sorted in French sorting centres. The committee includes various stakeholders in the value chain for sorting household packaging (Citeo, Derichebourg Environnement, Pellenc ST, Sepur, Tomra) and works on all types of household packaging (bottles, dispenser bottles, pots, films, cartons, bags, etc.) made of all kinds of materials, except glass. COCET's scope of action begins as soon as the packaging is placed in the yellow bin by the consumer and continues until it exits the sorting centre or pre-sorting centre in the case of the plastic packaging concerned. The test protocols established by COCET are the result of work carried out with sorting industry stakeholders and a consensus on their representativeness.

This Separation test protocol was drawn up by COCET. It is representative of the collection and transport system used in France. This protocol is available to manufacturers who wish to evaluate, under real-world conditions, the compaction that occurs in selective collection trucks in France.

This protocol involves contacting three sorting centres or transfer platforms and requires a precise operating procedure, as described in this document.

Version no.	Date	Description
I	June 2026	Initial version

I. Scope

The Separation test protocol focuses on the product post-consumption stage (when the consumer disposes of the packaging) and on the collection and transport of household packaging (excluding glass) by dump truck. During these stages, consumer sorting behaviour and physical stresses can affect the packaging's form. Components may be separated and deformations may occur, whether reversible or not, linked in particular to compaction stresses. This can affect the sorting of the packaging at the sorting centre. This is particularly true for packaging made of multiple associated components, which may or may not be separated by the consumer or through compaction.

This protocol:

- Applies to household and similar packaging,
- Does not apply to industrial and commercial packaging.

Its scope:

- Covers the consumer sorting behaviour stage (unlike the **COCET Compact I Protocol**) as well as the collection and transport stage using a dump truck
- Does not include the physical stresses applied to packaging at sorting centres.

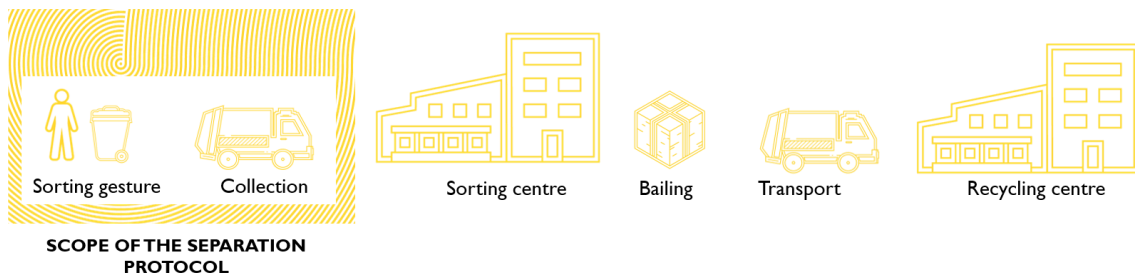


Figure 1 Scope of the COCET Separation Protocol

This protocol applies to packaging that is already on the market and can be easily recognised visually among other packaging waste. It cannot be used for prototypes or packaging with limited market presence.

This protocol offers the advantage of including consumer sorting behaviour in the study of component separation, in addition to the collection and transport stage by dump truck. However, since its implementation requires the retrieval of packaging actually present in consumers' sorting bins, it is not possible to pre-identify the packaging of interest to be recovered, which makes collection more complex.

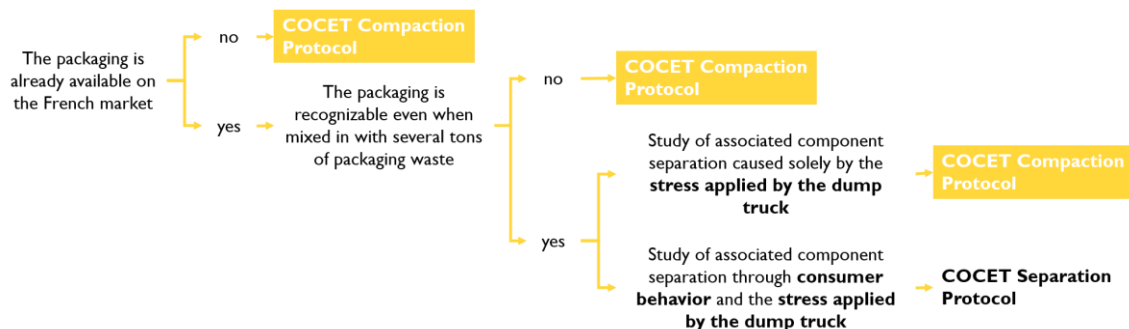


Figure 2 Determining the use of the COCET Separation Protocol

II. Aims

This protocol assesses the impact of consumer sorting behaviour and collection and transport by dump truck on the condition of household packaging upon arrival at a sorting centre, and more specifically on the separation of components associated with the main body of the packaging.

This protocol does not assess the packaging's suitability for sorting at a sorting centre, nor its recyclability.

This protocol is intended for industry stakeholders seeking to independently assess the separation of associated components during consumer sorting behaviour and collection and transport under compaction conditions. Tests performed by an industrial operator in accordance with this protocol are not eligible for a specific COCET Notice. Should they wish to do so, the Requester may share the results with COCET, which may, where appropriate, consider whether the separation issue warrants further consideration as part of a General Notice.

The tests should be conducted in accordance with the procedures described in this protocol to ensure that the results are representative and to determine whether the associated components under study are systematically separated during the stages associated with consumer sorting behaviour and collection and transport by dump truck.

III. Terms of reference

Any company (packaging manufacturer, marketer, resin manufacturer, distributor, etc.) wishing to assess the separability of packaging components during consumer sorting behaviour and collection and transport involving compaction may use this protocol to conduct a test.

The company wishing to perform compaction tests shall be referred to hereafter as the "Requester".

IV. Packaging tested

The packaging tested consists of household or similar packaging actually placed on the market, used and then deposited in the sorting bin by the consumer.

There is no packaging preparation stage. Nevertheless, the packaging must be clearly identified and described in the test report and documented with photographs: overall packaging and details of the various associated components studied.

Note: The packaging of interest will need to be recovered from the unloading area at the sorting centre or transfer platform. It must therefore be easy to recognise and unambiguous among several tonnes of packaging waste.

To be avoided for this protocol:

- Study of packaging from a specific brand
It is very difficult, even for an expert eye, to identify, within a packaging stream made up of several tonnes of soiled waste mixed with unwanted items, a component belonging to a specific brand.
- A packaging category that may be confused with another category, thereby distorting the results
For example, the case of sealed pots with a peelable seal: when pots alone are recovered from an unloading area, their condition does not make it possible to determine whether they originally had a seal, a clip-on lid, both, etc. Recognition of this packaging category is not unambiguous.
- Study of packaging with limited market presence
If packaging is present in too small a quantity on the market, the stage of searching for the packaging of interest in the input stream will take all the longer (> 1 day).

For these cases, the Compaction protocol ([COCET Compact I Protocol](#)) should be preferred, as it facilitates identification of the packaging to be tested by pre-identification using coloured paint.

V. Procedure for Requesters

Stage 1: Contact COCET

The Requester contacts COCET via the [contact page](#) on COCET's website, describing its request with the help of the document in Annex I. The Requester will precisely define the packaging to be analysed as part of the study and will document the components that are likely or expected to be separated. 0

Stage 2: Contact with the sorting centres (MRF) or transfer platforms

After validation of the test request and submission of the completed Annex I, the Requester may identify three sorting centres or transfer platforms and define the financial and logistical arrangements with each site. The budget and timeframes to be allowed for conducting the tests will be communicated by these sites. The report will document the names and locations of the three selected sites.

Before the tests, the Requester must familiarise itself with the operating procedure for observing and counting the packaging item(s) studied.

VI. Testing

Procedure

A. Collection of the packaging of interest and counting of samples at the unloading site

The waste collected by dump truck is unloaded in the unloading area, at the intake of a sorting centre or on a transfer platform.

Note: It is recommended to ask for the material to be unloaded onto a flat, clean surface, away from any traffic, to ensure safe intervention.

The packaging of interest is recovered from the unloaded material for characterisation. The search is conducted by hand using tools (rakes, shovels) to dig through and turn over the packaging.

Note: It is the responsibility of the people doing the test to follow the industrial site's safety standards and to equip themselves accordingly (required PPE, tools).

Recovery of the packaging of interest must make it possible to recover 100 packaging items/main components targeted by the study.

Visual counting of the recovered packaging makes it possible to determine the number of packaging samples found, and to distinguish those with associated and separated components. Counts are performed after unloading, based on visual observation.

The report will include photos of the packaging that was found and categorised (associated and separated components).

VII. Results and Analysis

A. Measurements and calculation method

Glossary

“separated”: Number of main body samples (jars, bottles, etc.) found on their own, completely separated from all their associated components.

“partially separated”: Number of main body samples (jars, bottles, etc.) found with part of the associated component(s).

“associated”: Number of main body samples found with the component whose separability is being studied (lid, sleeve, etc.).

“recovered”: Number of samples recovered from the unloading area, which is the sum of separated, **partially separated** and associated packaging.

Case of **“interlocked”** items: If the packaging of interest is found interlocked with other packaging, there are two possible scenarios:

- It is possible to determine whether the sample is classified as **associated**, **partially separated** or **separated**: the sample is then counted in the corresponding category (**separated**, **partially separated** or **associated**).
- If the sample's classification cannot be determined, the packaging is recorded as **Interlocked**.

Notes:

- *Interlocked packaging is a sorting issue in its own right, but it is not part of the scope of this protocol.*
- *“Interlocked” packaging is not included in the “recovered” packaging count because it is not possible to identify whether the components are associated or not with the main body of the packaging covered by the study.*

Use of the results

The results obtained regarding the separation of associated components can be used, and are therefore representative and repeatable, if the number of recovered packaging items is ≥ 100 across the three unloading sites selected for these tests.

Otherwise, the results cannot be used.

Calculation of the separation rate

The separation rate is calculated using the following formula:

$$\% \text{ separation} = \frac{\text{separated}}{\text{recovered}}$$

B. Success criteria

To confirm that the separation of packaging components through consumer sorting behaviour, collection and transport with compaction is Acceptable, it is necessary to verify that, on average across the three unloading sites:

$$Nb \text{ recovered} \geq 100$$

$$\% \text{ separation} \geq 90\%$$

In this case, it is assumed that the components are systematically separated through the stages of sorting behaviour, collection and transport by compaction.

Otherwise, the separation rate of the associated packaging components during these stages is Unacceptable. The associated packaging components are not consistently separated.

VIII. Test Report

The Requester will prepare a report for COCET that includes all the documentation and an analysis of the data.

To facilitate understanding of the results, the Requester shall prepare a test report specifying the following:

The report should include the following statements:

- “Tests have been conducted in accordance with the COCET Sep I protocol”
- “This report does not, in itself, constitute a COCET notice or a notice regarding the sorting of the tested packaging.”

Samples tested:

- A description of the packaging covered by the study (including photographs)

If several batches of samples are covered, the descriptions and results for each batch of samples must be presented separately in the report.

Conducting the tests:

- Third-party testing organisation: identity documented
- Test date
- Test locations
- Recording of the samples found and details for each of the identified categories (with photos)

Analysis of the results:

- The calculations used to determine the separation rate

The Requester undertakes to adhere to the entire protocol and indicate any deviations from it in the test report with the corresponding reasons.

The test report will not systematically be the subject of a COCET notice. If the Requester wishes to submit the results to COCET for information, COCET will assess the relevance of issuing a general notice based on the tests conducted.

Annex I: COCET Separation Test Preparation Form

Company		PICTURE OF THE PACKAGING
First name, Last name		
Position		
Email		
Telephone number		

DESCRIPTION OF THE PACKAGING

Packaging type	
Trade Name/Reference number	
Description of the main body (shape, dimensions, composition)	
Description of each associated component shape, forme, dimensions, composition)	
Volume marketed	

REQUESTER'S UNDERTAKING

☐ I HEREBY CONFIRM THE FOLLOWING:

- I wish to conduct tests in accordance with the standard protocol set out by COCET
- I agree to cover all testing costs directly with the third parties involved in the testing
- I agree that the results will be sent to COCET for information

COMPANY STAMP

Date :

Last name, First name and
signature: