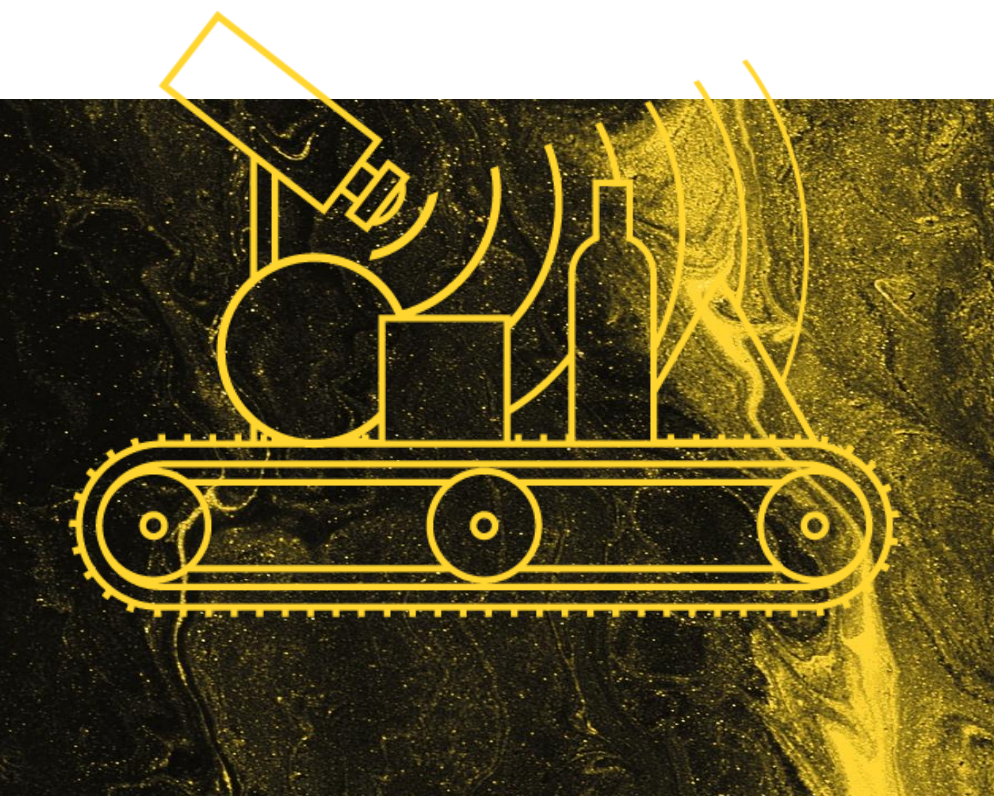


OPTICAL SORTING TEST PROTOCOL

for dark rigid plastic packaging



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, Tomra, Pellenc ST, Derichebourg Environnement, Sepur) 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 (including any additional sorting). The test protocols established by COCET are the result of work carried out with sorting industry stakeholders and a consensus on their representativeness.

This optical sorting test protocol was originally established by COTREP. Since 2025, the topic has been managed by COCET, as the protocol focuses on packaging sorting, which falls within the committee's scope.

This protocol reflects the settings most commonly used in France. It is available to manufacturers wishing to assess the detectability of their dark rigid plastic packaging on the French market.

Version no.	Written by ...	Date	Description
I	COTREP	January 2019	<i>Initial version</i>
I.2	COTREP	November 2021	<i>Update : simplification of tests and addition of a test for PET colour sorting</i>
I.3	COTREP	March 2023	<i>Minor updates</i>
I.4	COTREP	July 2024	<i>Contact updates</i>
I.5	COCET	June 2026	<i>COCET charter integration and minor updates</i>

I. Context

This protocol was originally established by COTREP and subsequently taken over by COCET, taking into account the technical knowledge and sorting practices in place in France. Its purpose is to specify tests to be performed to assess the potential of dark packaging to be detected during optical sorting processes. This step forms an essential part of the overall recyclability assessment for packaging.

Results obtained from tests performed based on this protocol are insufficient for determining packaging recyclability. This protocol merely reflects the packaging detectability and sortability phase and provides no basis for judging the suitability of packaging for regeneration or the feasibility of converting such regenerated granulate into new products.

Dark packaging

Black carbon pigment is commonly used to provide dark colours in packaging (intense, deep colours such as black, grey, green and purple) at competitive prices. However, optical sorting technologies at sorting centres are incapable of detecting and orienting packaging containing carbon black. This is due to carbon black absorbing the infrared light emitted by optical sorting equipment and sending back no signal. Consequently, unidentified recyclable dark mono-resin packaging items are processed as sorting rejects and not sent to the appropriate recycling streams. Alternative colorant solutions are being developed by colorant and packaging manufacturers to ensure that dark packaging is detectable in sorting centres and capable of recycling. This protocol has been specially devised to check the detectability of these alternatives and validate colorant solutions. Any tests performed must be the most representative possible of sorting centres for household packaging waste in France. Most optical sorting machines used in the majority of sorting centres are supplied by two manufacturers – Pellenc ST and Tomra. Tests should therefore be performed on the premises of these two companies, in their test centres.

How optical sorting machine operate

Optical sorting technology operate by near-infrared spectroscopy (NIR–VIS). The machine scans and detects passing packaging carried by a fast conveyor belt supplying the equipment. The spectra of packages (linked to their composition and colour) are analysed in milliseconds by the spectrometer, which compares them with reference spectra in a database. Packaging composition is determined based on the detected spectra and packaging is blown towards various chutes using compressed air.

Optical sorting machines use two detection methods to separate packaging:

- Near-infrared (NIR) spectroscopy only, based on the composition of plastic resins.
- Near-infrared (NIR) spectroscopy combined with colour assessment (VIS: visual), based on plastic resin composition and also its colour. This type of detection is used for packaging that needs to be sorted by colour. This is the case for PET, which is separated into two streams: clear PET and coloured PET.

Packaging detectability and sortability

Detectability relates to the potential for packaging to be correctly identified based on its resin type.

Sortability relates to the potential for packaging to be correctly directed to its recycling stream.

Consequently, in light of current material standards, rigid PET packaging should be separated by "colour" into clear PET and coloured PET streams. Dark PET packaging should be sent to the coloured PET stream.

For rigid PE, PP and PS packaging, only a resin-based distinction is currently applied, with no distinction currently drawn based on "colour". In order for packaging to be considered recyclable, it must first be accurately detected at sorting centres and sent to its recycling stream, before successfully completing the various regeneration steps.

II. Aims

This protocol is intended for colorant manufacturers or packaging manufacturers seeking to check that colorant solutions that have been developed are detectable by optical sorting technologies used in French sorting centres. This protocol tests the detectability and sortability of the packaging, but not its recyclability. Tests must be performed at the test centers of Pellenc ST and Tomra. They should be performed in two stages with packaging first undergoing a static test before being submitted for dynamic testing if it meets the criteria of the first test.

Static analysis

This involves determining the capability of the optical sorting machines to detect dark packaging and identify its constituent resin and "colour".

- Resin analysis: this resin will be referred to hereafter as the "target resin".
- Colour analysis: the sortability performance of PET packaging is also assessed during this phase. The aim is to ensure that dark packaging is correctly visually identified and not identified as clear PET.

Dynamic analysis

This involves assessing how effectively dark packaging waste is captured when included in a standard stream of household packaging, by comparing the results achieved with a standard sample.

III. Terms of reference

Companies wishing to perform detectability tests shall be referred to hereafter as "**Requesters**". Optical sorting machine manufacturers shall be referred to hereafter as "**O.S. manufacturers**".

IV. Procédure for requesters

Step 1 Contacting COCET

The Requester should contact COCET and describe its request using the document in **APPENDIX I**. If the Requester wishes to test the detectability of several packaging types (different resins, dimensions, thicknesses, shapes, colorant solution input ratios, etc.), it should inform COCET of this, specifying the entire packaging or colorant range it wishes to test. After reviewing the request, COCET will respond to the Requester indicating the number of tests that need to be performed.

COCET members' contact details are provided in the "Practical Information" section of this document.

Le Demandeur contactera le COCET en décrivant sa demande à l'aide du document en **APPENDIX I**. Si le Demandeur souhaite tester la détectabilité de plusieurs types d'emballages (différentes résines, dimensions, épaisseurs, formes, taux d'incorporation de la solution colorante, etc.), il devra en informer le COCET en précisant l'ensemble de la gamme d'emballage ou de colorants qu'il souhaite tester. Après examen de la demande, le COCET reviendra vers le Demandeur pour lui indiquer le nombre d'essais nécessaires à réaliser.

To contact COCET : [contact form](#).

Step 2 Contacting the O.S. manufacturers

If testing is required, COCET will provide the Requester with the contact details of the O.S. manufacturers in order for them to discuss financial and logistical arrangements. An approximate budget to be foreseen for performing tests is provided in the "Practical Information" section of this document.

Step 3 Preparing samples

After a test date has been confirmed, the Requester must submit test samples to the O.S. manufacturers:

- Sample type:
 - Only formed packaging can be tested to ensure that the results are representative.

- Any type of plastic packaging can be tested (rigid packaging¹ such as bottles, dispenser bottles, trays, pots, etc. excluding flexible packaging and film). Bottle caps and covers cannot be tested.
- Packaging may be new or used but must be emptied of its contents.
- Since the tests focus on the detectability of the colorant solution, tested samples should be separated from associated elements (labels, lids, bottle tops, covers, absorbent pads, etc.). Subsequent addition of other elements to packaging may affect the detectability and sortability of the end packaging.
- If a packaging is sometimes manufactured from coloured production scrap (which may itself contain carbon black) we strongly recommend testing this composition. This is because even small quantities of carbon black contained in production scrap may impact the detectability of such packaging during optical sorting.

- Number of packaging items to be submitted for testing for each type of test packaging:

This step varies depending on the resin type used in the packaging composition.

- For PE, PP ou PS resins:

	Validation of a packaging item or of a packaging range ²	Validation of a colorant solution
STATIC TEST	- 5 identical dark packaging items of a specific thickness and concentration (for a range, minimal thickness)	- 5 identical dark packaging items of the minimum thickness and maximum concentration in the range
DYNAMIC TEST	- 100 identical dark packaging items of a specific thickness and concentration (for a range, minimal thickness) - 100 standard packaging items: similar (same thickness) but clear or uncoloured	- 100 identical dark packaging items of the minimum thickness and maximum concentration in the range - 100 standard packaging items: similar (same thickness) but clear or uncoloured

For example, to test the sortability of a PP thermoformed tray, each O.S. manufacturer requires:

- 105 dark PP thermoformed trays (alternative colorant solution).
- 105 transparent, white or light-coloured thermoformed trays free of carbon black

¹ Rigid packaging is defined as offering a certain degree of deformation resistance and stability when stacked on shelves. The main element of rigid packaging is generally over 300 micrometres thick. The definition of rigid packaging given here relates to its anticipated ballistic behaviour during sorting and recycling processes.

² A packaging range is defined as packages having the same shape, the same resin, the same colorant solution and at the same concentration but with different sizes. A range can also include the same thermoformed sheet for different formats of pots and trays.

- For PET resins:

	Validation of a packaging item or of a packaging range ²	Validation of a colorant solution
STATIC TEST	- 5 identical dark packaging items of a specific thickness and concentration (for a range, minimal thickness)	Identical dark packaging items of the minimum thickness for the range: • 5 packaging items of the maximum concentration • 5 packaging items of the minimum concentration
DYNAMIC TEST	- 100 identical dark packaging items of a specific thickness and concentration (for a range, minimal thickness) - 100 standard packaging items: similar (same thickness) but coloured with a light colour or uncoloured	- Identical dark packaging items of the minimum thickness for the range: • 100 packaging items of the maximum concentration • 100 packaging items of the minimum concentration - 100 standard packaging items: similar (same thickness) but coloured with a light colour or uncoloured

"Minimum concentration" denotes the lowest recommended concentration (based on the guidelines of the colourist or converter) of colorant for integration in a dark PET packaging item or packaging range.

For example, to test the sortability of a colorant solution for PET thermoformed trays, each O.S. manufacturer requires:

- *105 dark PET thermoformed trays (alternative colorant solution) of the minimum thickness and maximum colorant concentration*
- *105 dark PET thermoformed trays (alternative colorant solution) of the minimum thickness and minimum colorant concentration*
- *105 transparent PET thermoformed trays of the minimum thickness containing no carbon black.*

- Labelling samples

In general, all samples provided should be fully labelled (and should, as a minimum requirement, be sent in a clearly identified bag/cardboard box for each item sent).

For tests performed on PET packaging, Requesters should label each sample individually, ensuring that they use small paper labels to avoid any disruption to sorting that may be caused by such labels. **The label should cover no more than 10% of packaging surface area. This step is essential for distinguishing between minimum and maximum concentrations for PET samples.**

Step 4 Sending samples

After samples have been labelled (PET samples only), they should be sent separately to both O.S manufacturers. **APPENDIX 2** should be completed and attached to each parcel, and also emailed to the O.S. manufacturers prior to samples being sent. We recommend sending samples at least **10 days** prior to testing.

V. Preparation of tests by the O.S. manufacturers

Equipement

The equipments used in the test centres should be systematically the same used from one test to another. Machine settings should be the most representative possible of those currently used in sorting centres in France and have been determined in consultation with COCET. Any change in parameters by the O.S. manufacturers will be notified in advance and validated with COCET.

IMPORTANT

- *The aim is to perform tests that are the most representative possible of procedures in modern sorting centres in normal operating conditions.*
- *The machine settings should be fixed and identical for each test for a same reference stream. They may be readjusted when changing the reference stream.*

Preparing samples

For the purpose of the two tests, packaging provided by Requesters can be manually crushed by the O.S. manufacturers so that it is the most representative of the state of waste following collection processes. A stream of packaging waste³ sampled from selective collection is required for dynamic testing of all resins. This stream will be referred to hereafter as the "**SC stream**".

A second stream of PET packaging waste⁴ is also required for dynamic testing of PET packaging. This stream will be referred to hereafter as the "**PET stream**".

Both streams will be provided by COCET from sorting centres and may be reused for several dynamic test campaigns. If required by the O.S. manufacturers, COCET will provide new SC streams and PET streams on request. Please note that a period of 30 days should be allowed between such requests and receipt of the SC and PET streams. The first time, all steel and black packaging in the stream should be removed by the O.S. manufacturers.

Preparing for sorting

On receipt of a new SC or PET stream, the O.S. manufacturers should record sorting operations for each foreseen configuration.

For the SC stream, one sorting operation should be recorded for each foreseen target resin, i.e. one sorting operation for PET, one for HDPE, one for PP and one for PS.

For the PET stream, a sorting operation should be recorded for the foreseen target resin, i.e. for coloured PET (including all PET colourings and excluding clear and blue transparent PET).

³ The stream should be sampled at the ballistic outlet for hollow containers with a maximum of 2% residual film. Ferrous materials should be removed by the O.S. manufacturers. The stream should therefore consist of LPB (liquid packaging board), aluminium, rigid plastic, and potential rejects.

⁴ The stream should be sampled after initial optical sorting separating the PET stream from the hollow container stream. Ferrous materials should be removed by the O.S. manufacturers. The stream should therefore consist of rigid plastic and potential rejects.

- **Standard stream:** Only the SC or PET stream should be used in this test, with no standard packaging or test sample.
- **Sorting:** Packaging composed of the target resin should be positively sorted. Other packaging should be negatively sorted as rejects. In the case of the PET stream, a "colour" sorting test should be performed in combination with resin detection for the coloured PET sorting operation (NIR + VIS).
- **Measurement:** The two output streams (blown stream and non-blown stream) should be split into two categories for measurement:
 - Weight of packaging composed of the target resin
 - Weight of other resins/packaging items
- **Analysis:** The results of these measurements should be used to determine benchmark separation performance:
 - Capture rate for packaging composed of the target resin: CR_i

$$CR_i [\%] = \frac{\text{weight of blown target packaging}}{\text{weight of blown target packaging} + \text{weight of non-blown target packaging}} \times 100$$
 - Purity of the blown stream: P_i

$$P_i [\%] = \frac{\text{weight of blown target resin packaging}}{\text{weight of blown packaging}} \times 100$$
- **Verification:** Capture rate and purity values for each of the sorting operations should be forwarded to COCET for verification. It is recommended that these exceed 90%. If this is not the case, the O.S. manufacturer may adjust the machine settings in consultation with COCET and restart the standard test.

Once the sorting operations are validated, the capture rate and purity of the blown stream should only be remeasured when the SC stream is changed.

VI. Tests to be performed

Step 1 Static tests

- Test procedure

Samples should be positioned below the optical sensor to determine whether the optical sorting machine is able to detect the dark packaging items and identify their constituent resins, i.e. the target resins (specified by the Requester in [APPENDIX I](#)).

Where appropriate, static tests should be performed with samples in different positions (side A up, side B up, packaging on its side, etc.).

For PET, once accurate detection of the resin is ascertained, the sortability of packaging items should also be tested in this phase. At this stage, it is necessary to ensure that dark packaging items are correctly visually identified and not identified as clear PET. To achieve this, steps should be taken to determine whether the optical sorting machine is capable of detecting dark packaging items as coloured PET.

- Success criterion

For the static test, the standard packaging and dark packaging should be visible and the detected spectrum should be sufficiently similar to that of the target resin.

- Result analysis

Results should be recorded in the test report:

- If the results meet the test criteria, a dynamic test should be performed.
- If the results do not meet the test criteria, a dynamic test is not necessary. Changes must be made to the alternative dark solution.

Step 2 Dynamic tests

The purpose of the dynamic test is to assess the detectability and sortability of colorant solutions in similar conditions to those in sorting centres. Tested samples are mixed in with a stream of packaging waste (reference stream). The entire stream on the fast conveyor passes beneath the spectrometer. Packaging is blown and guided towards different outlet chutes depending on its composition and the spectrum detected.

- Tests condition

IMPORTANT

- *The settings applied should be fixed and identical for all tests performed for a same reference stream. They may be readjusted when changing the reference stream.*
- *They should be the most representative possible of genuine current conditions in sorting centres. It is imperative that they are not optimised during testing.*

Machine settings (flow rate, belt width, sensor type, nozzle type, nozzle spacing, resolution, belt speed, ejection pressure) should be the most representative of those currently used at sorting centres and have been defined in consultation with COCET. The following streams should be sorted: PE, PP, PS, PET and coloured PET.

The capture rate for the tested packaging items should be measured for each dynamic test.

- **Test procedure**

This step varies depending on the resin type used in the packaging composition

a. For PE, PP, PS packaging:

Dynamic tests should be performed as follows:

Resin detection test (NIR) with standard packaging items and tested dark packaging items, in the SC stream:

- **Preparing the stream:** The 100 standard packaging items and 100 dark packaging items of maximum concentration should be used in this test. Once compacted, they should be mixed in evenly with the SC stream prior to testing.

- **Sorting:** Once the equipment is set (see previous section on Preparation of tests by the O.S. manufacturers), packaging made of the target resin should be positively sorted. Other packaging should be negatively sorted as rejects.

- **Measurement:** Both output streams (blown stream and non-blown stream) should be measured: A count should be performed of the number of standard packaging items and dark packaging items present in the blown stream (target resin), and of those present in the non-blown stream.

- o Number of standard samples identified in the blown stream: *no std. samp. correct stream*
- o Number of standard samples identified in the non-blown stream: *no. std samp. incorrect stream*
- o Number of dark test samples identified in the blown stream: *no. dark samp. correct stream*
- o Number of dark test samples identified in the non-blown stream: *no. dark samp. incorrect stream*

- **Analysis :** The results of these measurements should be used to define the standard capture rates and the capture rate for dark packaging items:

- o Standard packaging capture rate

$$CR_{std}[\%] = \frac{no.std.samp.correct\ stream}{no.std.samp.correct\ stream + no.std.samp.incorrect\ stream} \times 100$$

- o Dark packaging capture rate

$$CR_{dark}[\%] = \frac{no.dark\ samp.correct\ stream}{no.dark\ samp.correct\ stream + no.dark\ samp.incorrect\ stream} \times 100$$

- **Success criteria:** For test criteria to be met, the capture rate for tested dark packaging must satisfy both of the following conditions:

- o $CR_{dark} \geq 80\%$
- o $CR_{dark} \geq CR_{std} - 10\%$

- **Removal of packaging:** Remove the 100 standard packaging items and 100 dark packaging items from the stream.

The test report should be completed by the O.S. manufacturers to enable COCET to analyse the results.

b. For PET packaging:

Dynamic tests should be performed in two steps:

1. Resin detection test (NIR) with standard packaging items and tested dark packaging items, in the SC stream:

- **Preparing the stream:** The 100 standard packaging items and 100 dark packaging items of maximum concentration should be used in this test. Once compacted, they should be mixed in evenly with the SC stream prior to testing.

- **Sorting:** Once the equipment is set (see previous section on Preparation of tests by the O.S. manufacturers), packaging made of the PET target resin should be positively sorted. Other packaging should be negatively sorted as rejects.

- **Measurement:** Both output streams (blown stream and non-blown stream) should be measured: A count should be performed of the number of standard packaging items and dark packaging items present in the blown stream (target resin), and of those present in the non-blown stream.

- o Number of standard samples identified in the blown stream: *no. std. samp. correct stream*
- o Number of standard samples identified in the non-blown stream: *no. std. samp. incorrect stream*
- o Number of dark test samples identified in the blown stream: *no. dark samp. correct stream*
- o Number of dark test samples identified in the non-blown stream: *no. dark samp. incorrect stream*

- **Analysis :** The results of these measurements should be used to define the standard capture rates and the capture rate for dark packaging items:

- o Standard packaging capture rate

$$CR_{std}[\%] = \frac{\text{no. std. samp. correct stream}}{\text{no. std. samp. correct stream} + \text{no. std. samp. incorrect stream}} \times 100$$

- o Dark packaging capture rate

$$CR_{dark}[\%] = \frac{\text{no. dark samp. correct stream}}{\text{no. dark samp. correct stream} + \text{no. dark samp. incorrect stream}} \times 100$$

- **Success criteria:** For test criteria to be met, the capture rate for tested dark packaging must satisfy both of the following conditions:

- o $CR_{dark} \geq 80 \%$
- o $CR_{dark} \geq CR_{std} - 10\%$

- **Removal of packaging:** Remove the 100 standard packaging items and 100 dark packaging items from the stream.

2. "Colour" detection test (NIR + VIS) with tested dark packaging items, in the PET stream:

- **Preparing the stream:** The 100 tested dark packaging items of minimum concentration and the 100 tested dark packaging items of maximum concentration should be used in this test. Once compacted, they should be mixed in evenly with the PET stream prior to testing.

- **Sorting:** Packaging composed of the target resin **coloured PET** should be positively sorted. Other packaging should be negatively sorted as rejects.

- **Measurement:** The two output streams (blown stream and non-blown stream) should be measured: A count should be performed of the number of dark packaging items of minimum and maximum concentration present in the blown stream (target resin), and of those present in the non-blown stream.

- o Number of dark samples of minimum concentration identified in the blown stream: *no. min. samp. correct stream*

- o Number of dark samples of minimum concentration identified in the non-blown stream: *no. min. samp. incorrect stream*

- o Number of dark samples of maximum concentration identified in the blown stream: *no. max. samp. correct stream*

- o Number of dark samples of maximum concentration identified in the non-blown stream: *no. max. samp. incorrect stream*

- **Analysis :** The results of these measurements should be used to determine the capture rate for the tested dark packaging:

- o Capture rate for dark packaging of minimum concentration

$$CR_{dark\ min}[\%] = \frac{no.\ min.\ samp.\ correct\ stream}{no.\ min.\ samp.\ correct\ stream + no.\ min.\ samp.\ incorrect\ stream} \times 100$$

- o Capture rate for dark packaging of maximum concentration

$$CR_{dark\ max}[\%] = \frac{no.\ max.\ samp.\ correct\ stream}{no.\ max.\ samp.\ correct\ stream + no.\ max.\ samp.\ incorrect\ stream} \times 100$$

- **Success criteria:** For test criteria to be met, the capture rate for tested dark packaging must satisfy both of the following conditions:

- o $CR_{dark\ min} \geq 80\ \%$

- o $CR_{dark\ max} \geq 80\ \%$

- **Removal of packaging:** Remove the 200 dark packaging items from the stream.

The test report should be completed by the O.S. manufacturers to enable COCET to analyse the results.

COCET can only issue a positive opinion on the detectability of packaging if static and dynamic tests have been performed at both test centres of O.S. manufacturers and the test criteria have been met.

Please note: COCET reserves the right to simplify the protocol in consultation with the Requester.

VII. Rapport de test

Each O.S. manufacturer must draw up a test report including the following details:

- A description of samples received and tested including photographs. If several batches of samples have been tested, descriptions and results for each batch of samples should be presented separately in the report.
- Details of the equipment used.
- A summary of the test parameters applied. • The number of samples and procedures for each test.
- The report should include the following statements:
 - "Tests have been conducted in accordance with the COCET test protocol - Assessment of dark packaging detectability in optical sorting processes – June 2026".
 - "This report does not, as such, constitute a COCET opinion. In order for COCET to issue an opinion on the detectability of an alternative dark solution, this test report must be submitted to COCET."
- O.S. manufacturers undertake to adhere to the entire protocol and indicate any deviations from it in the test report.

Reminders:

- The methodology used for testing all samples submitted for analysis should be strictly identical.
- Results presented in reports should relate solely to tests conducted at test centres with machine settings that are the most representative of those used in modern sorting centres in France in normal operating conditions.
- No reference should be made in reports to results obtained with optimised settings without COCET consultation.

In order for a positive opinion to be issued on the sortability of an alternative dark solution, both test reports must show that the protocol has been followed, demonstrate that test criteria have been met, and be submitted to COCET.

VIII. Confidentiality

If required by Requesters, a confidentiality agreement covering any details of requests and the content of reports (particularly results and observations) may be signed between the O.S. manufacturers, COCET and Requesters.

IX. Practical information

Contacts

To carry out tests on dark packaging, please contact COCET with the online form: <https://www.cocet.fr/en/contact-us/>

Once **APPENDIX I** completed and approved, the test procedures and the contact information for the original equipment manufacturers will be provided to the Requester.

Coût des essais – à la charge du Demandeur

Requester shall bear the costs of testing and discuss these directly with the O.S. manufacturers.

As a guideline, each test on the premises of an O.S. manufacturer should cost between €250 and €2,000 exclusive of VAT. Precise costings should be determined by each O.S. manufacturer based on the number of sample batches tested and the number of static and/or dynamic tests conducted.

Requesters should also budget for:

- The cost of creating and labelling samples (to be performed by Requesters)
- The cost of sending samples to the O.S. manufacturers
- Any costs for returning samples after testing. Les coûts des essais sont à la charge du

Appendix I – COCET sorting test request form

Company		
First Name/Last Name		PACKAGING
Position		
E-mail		PICTURE
Telephone		

DESCRIPTION OF THE TEST PACKAGING

Packaging type	
Trade name / Reference number	
Colour	
Thickness (the smallest thickness in the case of a range)	
Packaging dimensions	
Majority resin (if multilayers or barriers present, provide a description)	
Does the packaging contain any mineral charge? (TiO ₂ , etc.)	
For dark colorant solutions	
Supplier / Trading name	
Input rate (%) ⁵	
Base colour of the colorant solution (for PET packaging items)	

REQUESTER'S UNDERTAKINGS

☐ I HEREBY CONFIRM THAT:

- I wish to conduct tests in accordance with the standard protocol set out by COCET.
- I confirm that tests will be conducted on the premises of the two O.S. manufacturers (Pellenc ST and Tomra).
- I agree that results will be sent to COCET for its analysis and opinion.
- I agree to bear the entire cost of testing, which I will arrange directly with the O.S. manufacturers.
- I certify that the tested colorant solution:
 - Meets the essential requirements of the Packaging and Packaging Waste Directive (94/62/EC).
 - Does not alter the density of the packaging: the density of packaging mainly consisting of PP or PE must be < 1 and > 1 for packaging mainly consisting of PET or PS.

COMPANY STAMP

Date :

Name and Signature :

⁵ Indicate the concentration of the colorant solution:

- The specific concentration for validating a packaging item.
- The minimum and maximum concentration for validating a packaging range or colorant solution for PET.
- The maximum concentration for validating a packaging range or colorant solution for PE, PP and PS.

APPENDIX 2 – Document to be completed and attached to each package of samples

Purpose of testing Standard sorting protocol for DARK packaging – COCET

Requester

Company

First Name/Last Name

**O.S. manufacturer
contact**

Test date ... / ... /

**Reference number of
the sample and
target resin**

**What should be
done with samples
after testing?**

- ☐ Please do not return samples.
 - ☐ Please return samples after testing. The return address is:
 - Name:
 - Street:
 - Post code/City :
 - Country:
-