Biowaste quality assessment methodology

The REA Biowaste Quality Assessment Methodology outlines a process for sampling, visually assessing, categorising, and reporting materials in incoming materials delivered to facilities treating biodegradable wastes. It enables facilities to monitor waste quality, support contract negotiations, and ensure compliance with acceptance criteria.
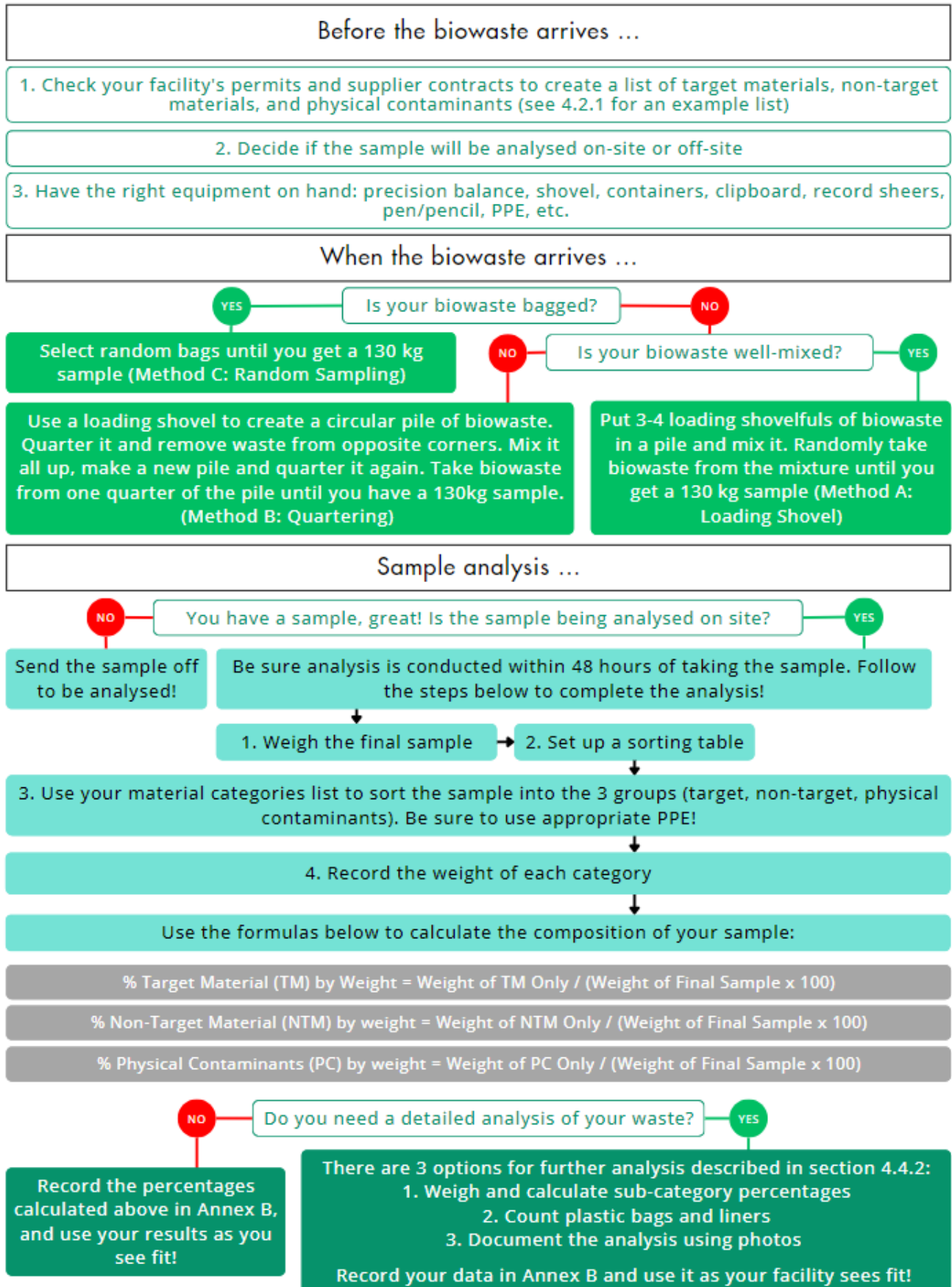
Methodology overview

The methodology involves:

1. **Representative Sampling**: Depending on the method chosen (loading shovel, quartering, or random sampling), a minimum of 130 kg of sample is collected that is representative of the delivered load. Bulky waste items should be documented separately and not included in final samples.

2. **Sorting**: Using appropriate equipment and PPE, the sample is sorted into Target Materials (TM), Non-Target Materials (NTM), and Physical Contaminants (PC) categories and their appropriate sub-categories. Before sorting, it is important that facilities check and, where necessary, tailor sub-categories in each category to their own legal and business requirements. Refer to Annex A for information on sorting compostable packaging and non-packaging items.

3. **Analysis**: The sorted materials are weighed and recorded. The percentage by weight of TM, NTM, and PC is calculated and reported using Annex B. Sub-categories within NTM and PC can also be calculated and reported using Annex B. The methodology also recommends reporting the number of plastic bags and liners present.

4. **Reporting**: Annex B provides Excel worksheets for reporting assessment results, including TM, NTM, and PC percentages, as well as sub-categories within NTM and PC. Annex C includes a chart for monitoring PC levels over time.

Operators can use the flow-chart below to get an understanding of how the methodology could work for their facility. Please refer to the full methodology for more information or contact us at the REA with any questions.

Methodology flowchart

Before the biowaste arrives …

1. Check your facility's permits and supplier contracts to create a list of target materials, non-target materials, and physical contaminants (see 4.2.1 for an example list)

2. Decide if the sample will be analysed on-site or off-site

3. Have the right equipment on hand: precision balance, shovel, containers, clipboard, record sheers, pen/pencil, PPE, etc.

When the biowaste arrives …

Is your biowaste bagged?

YES → Select random bags until you get a 130 kg sample (Method C: Random Sampling)

NO → **Is your biowaste well-mixed?**

NO → Use a loading shovel to create a circular pile of biowaste. Quarter it and remove waste from opposite corners. Mix it all up, make a new pile and quarter it again. Take biowaste from one quarter of the pile until you have a 130kg sample. (Method B: Quartering)

YES → Put 3-4 loading shovelfuls of biowaste in a pile and mix it. Randomly take biowaste from the mixture until you get a 130 kg sample (Method A: Loading Shovel)

Sample analysis …

You have a sample, great! Is the sample being analysed on site?

NO → Send the sample off to be analysed!

YES → Be sure analysis is conducted within 48 hours of taking the sample. Follow the steps below to complete the analysis!

1. Weigh the final sample → 2. Set up a sorting table

3. Use your material categories list to sort the sample into the 3 groups (target, non-target, physical contaminants). Be sure to use appropriate PPE!

4. Record the weight of each category

Use the formulas below to calculate the composition of your sample:

% Target Material (TM) by Weight = Weight of TM Only / (Weight of Final Sample x 100)

% Non-Target Material (NTM) by weight = Weight of NTM Only / (Weight of Final Sample x 100)

% Physical Contaminants (PC) by weight = Weight of PC Only / (Weight of Final Sample x 100)

Do you need a detailed analysis of your waste?

NO → Record the percentages calculated above in Annex B, and use your results as you see fit!

YES → There are 3 options for further analysis described in section 4.4.2:
1. Weigh and calculate sub-category percentages
2. Count plastic bags and liners
3. Document the analysis using photos

Record your data in Annex B and use it as your facility sees fit!

1. Scope

This document and its annexes provide a method for sampling, visually assessing, categorising, and reporting Target Materials (TM), Non-Target Materials (NTM) and Physical Contaminants (PC) in waste solids delivered to facilities designed for treating biodegradable wastes, e.g. composting, anaerobic digestion (AD), and integrated composting and AD facilities.

This methodology is largely based on the method recommended and successfully implemented by the Italian Composting Association (CIC)[1], with some adaptations. This methodology provides guideline lists of sub-categories in TM, NTM and PC material categories. Before sample analysis, it is important the operator tailors the facility's material sub-categories lists to its and the business's specific legal, regulatory, and commercial requirements.

Annex A provides guidance on visual means of identifying independently certified compostable packaging and non-packaging items.

Annex B provides template worksheets for reporting information about:

- the received load, loads or part-load to be sampled and any bulky waste items in it/them;
- after removal and weighing of any bulky waste items, the mass of sample taken from those loads / that load or part-load;
- the total mass and percentage of NTM in the sample as well as masses and percentages of each NTM sub-category; and
- the total mass and percentage of PC in the sample as well as masses and percentages of each PC sub-category.

In Annex B, the total PC percentage the operator / sample analyser reports for the sample is also assumed and reported as the total PC percentage in the load, loads or part-load sampled; this is because the sample taken and analysed aims to be representative of what was sampled.

Annex B also includes a template worksheet that uses figures from its other worksheets to calculate and report: the calculated weight and % w/w of rejects (excluding bulky waste) if the operator's process rejects all PC and NTM; and calculated weight and % w/w of rejects (excluding bulky waste) if the operator's process instead rejects all PC but feeds in all NTM.

Annex C provides a table for entering PC % w/w results and an automatically generated chart that can be used for plotting changes in PC results through time. The chart compares the PC results with the maximum % w/w PC the facility has set for waste solids received (after removal of any bulky waste items from the wastes received).
This will enable operators to:

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[1] CIC paper, *UNI/PdR123:2021. Test method for determining the quality of organic waste to be recovered through anaerobic digestion and composting processes*

1. ascertain and monitor physical contamination levels in individual or multiple loads of solid wastes delivered to composting facilities, AD facilities and integrated AD plus composting facilities;
2. obtain evidence to support establishing or revising maximum physical contaminant acceptance criteria in contracts with waste suppliers;
3. check compliance with the acceptance criteria specified in existing contractual arrangements;
4. provide waste suppliers with feedback on specific collection rounds that routinely cause physical contaminant issues; and
5. justify implementing differential pricing for waste acceptance, based on results of assessment carried out.

Assessment of the levels and types of physical contaminants in delivered waste should be of particular interest to sites receiving loads with excessive levels of physical contaminants, or where disputes arise about physical contaminant levels.

It is recommended that assessment is carried out <u>at least quarterly</u>, to account for any potential seasonal variation.

2. Tools and equipment

To carry out the analysis the following tools and equipment will be needed:

- Precision balance
- Shovel for material picking and handling
- Containers, sufficient number for the waste sub-categories (see 4.1)
- Sorting table (optional and recommended when handling and assessing bagged biowastes)
- Clipboard(s), record sheet(s), pen/pencil
- Personal Protective Equipment
  - Hi-Viz jacket
  - Sharps-resistant gloves
  - Safety boots
  - Dust mask or if higher specification mask if any person carrying out the work has been assessed as needing a higher spec mask.
  - Anything else not listed above but required in the site's PPE assessment document.

3. Sampling

Sampling may be carried out at the organics recycling facility, i.e. composting or anaerobic digestion facility, or at a waste transfer or storage facility.

The aim is to obtain a final sample for analysis that is representative of the composition of the tipped load being sampled. When a load has been identified and selected for sampling, it is recommended that a visual assessment of the load is carried out and photographs of it are taken prior to sampling. After sampling, photograph the final representative sample of the sampled biowaste load(s). File and keep the visual assessment record and photographs.

Bulky waste items (e.g. furniture, an appliance or large machine), are not categorised as Physical Contaminants or Non-Target Material (see guideline list provided in 4.2.1) but should be separately recorded. If a Bulky Waste item is found, separate it from the biowaste before the biowaste is sampled, weigh it, photograph it, and record its mass and a brief description of it in Annex B's Bulky Waste worksheet. The total mass of bulky waste item(s) found in the biowaste before sampling is subtracted from the biowaste loads' / load's / part-load's total mass, in Annex B.

Where practicable, the delivered load(s) should be mixed prior to sampling to ensure the material is homogenous.

3.1 Sample quantity

The minimum quantity of the sample to be assessed is **130 kg**. This final sample should be representative of the sampled loads, load or part-load delivered. It should be taken according to one of the sampling methods listed in Table 1.

3.2 Sampling methods

Sampling can be carried out using one of the following methods.

Table 1. Summary of sampling methods	
Method A ('Loading shovel' method)	Recommended for green waste, co-mingled green and food waste, and food waste only, whether bagged or not.
Method B ('Quartering')	Recommended for green waste, co-mingled green and food waste, and food waste only, whether bagged or not.
Method C ('Random sampling')	Only suitable for bagged biowaste.

Further guidance on designing a sampling plan can be found in BS EN 14899:2005, Characterisation of waste – Sampling of waste materials – Framework for the preparation and application of a sampling plan.

3.1.1 Method A ('Loading shovel' method)

With a loading shovel, three to four full- or part-bucket loads of biowaste should be taken from the tipped load(s). The bucket loads should be taken from points distributed throughout the load that is being sampled. Material from the buckets should be discharged on a designated area of the site and then piled together and thoroughly mixed to ensure the material is homogeneous. From the resulting pile, one full- or part-bucket load should be subsequently taken. Then tip out what's in the bucket and randomly take incremental samples to obtain the at least 130 kg of final sample (to be assessed).

3.1.2 Method B ('Quartering')

This method can be carried out on more than one load, a whole load or a portion of a load which is well mixed prior to sampling. With a loading shovel, the biowaste should be evenly spread on a designated area of the site to form a 'cake'. Then, divide the 'cake' into equally sized quarters. The material in two opposite quarters should be discarded. Mix the remaining two quarters to ensure they are homogeneous and combine this material to form a new 'cake.' The new 'cake' should be quartered again, following the same procedure. The sample for assessment should be collected from one of the resulting quarters. Incremental samples should be taken from the outside edge towards the centre of one quarter until the weight of the final sample is at least 130 kg.

First quartering

Second quartering

Discard	Keep
Keep	Discard

Discard	Discard
Sample	Discard
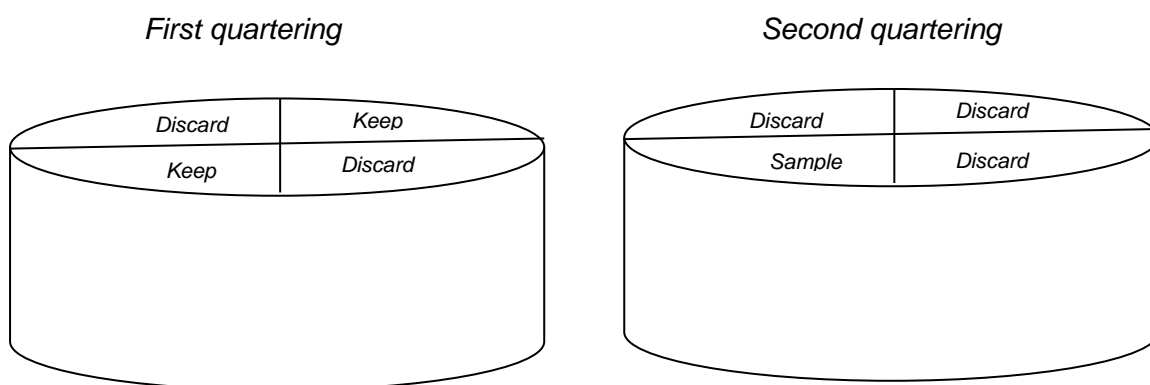
3.1.3 Method C ('Random sampling')

This method is best suited for biowaste delivered in bags (e.g. polyethylene bags or compostable kitchen caddy liners). In this case, bags (including their contents) should be randomly taken from the delivered load and progressively weighed, until at least 130 kg of final sample is obtained.

REA recommends this method is only used when the delivered load is / loads are 100% bagged. However, should this method be used when loose biowaste is also included within the load(s), it is recommended that the sample is taken using a shovel or a fork rather than by handpicking, to ensure a proportion of loose biowaste is represented in the final sample. This ensures a representative final sample is obtained.

Finally, this method is best suited for taking samples from small loads, given the potential high number of bags needed to be taken to obtain a representative final sample.

Example of a load of food waste bagged in compostable liners

4. Analysis

4.1 Final sample location of assessment, storage and weighing

Analysis of the final sample can be carried out on-site or off-site. If the latter, this is likely to be done by a contracted service provider. If carried out on site, analysis should be done in a suitable area with sufficient space for sorting the sample into the material categories (see section 4.3. and 4.4.1) and, optionally, the fractions in NTM and PC into their sub-categories (see section 4.4.2).

Final sample analysis should be carried out within 24 to 48 hours of obtaining the final sample. Its mass should be the same directly after being obtained and directly before being analysed. If it needs to be stored before analysis, store it in a way that ensures it does not change in mass before analysis is conducted. The same applies whether the sample is analysed on-site or off-site.

Accurately weigh the final sample before it is analysed. For example, this can be done by filling as many wheeled bins as needed with the final sample, weighing each filled bin on a digital scale, adding up their total mass and then subtracting the mass of each empty wheeled bin.

4.2 List of material categories and sub-categories

Prior to sorting the final sample's contents (see 4.3.1 and 4.3.2), check the facility's authorisation to operate and waste supplier contracts to establish the facility's list of material categories and material sub-categories. ('Material' below is the single term used for waste and any non-waste materials received.)

The list should set out the following three material categories:

- biodegradable materials suitable for biological treatment and targeted by the facility (**Target Materials, TM**);

- biodegradable materials suitable for biological processing but non-targeted by the facility (**Non-Target Material, NTM**); and
- biodegradable-but-contaminating-substance-included materials and non-biodegradable materials that are always unsuitable for biological treatment (**Physical Contaminants, PCs**).

A guideline list is provided in 4.2.1, including sub-categories for each material category. It is based on the waste types an in-vessel composting facility that treats source-segregated biodegradable wastes might target, others it might not target and wastes that are PCs at all biowaste treatment facilities.

Each facility's TM and NTM material sub-categories list will be different depending on authorisation type, material supplier contracts, material stream type, processing equipment, participation in compost/digestate certification schemes, and desired compost / digestate output type.

Before sample analysis, it is important to tailor the facility's material sub-categories list to its and the business's specific legal, regulatory, and commercial requirements.

The operator should also make and record a plan for how often their tailored list should be reviewed, or what types of change would trigger their next review.

If the facility's tailored list becomes different from the guideline list provided in 4.2.1, the operator needs to modify the Annex B Biowaste Assessment Report Template's appropriate worksheets (B and/or C).

4.2.1 Guideline sub-categories for each material category

Guideline **Target Material** (TM) sub-categories:

1. **Plant-tissue** wastes (e.g. garden wastes)
2. **Food** wastes, includes tea bags with or without their contents[2].
3. **Bags, liners and sacks** independently certified compliant with one of the standards for **industrially compostable** items and/or one of the standards[3] for **home compostable** items
   (Note: these may consist of compostable plastic, paper or a combination of compostable materials, may be pigmented and likely to carry printed information.)

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[2] Given majority market shift in the UK to certified industrially compostable tea bags, count all tea bags as Target Material. Tea bags are expected to be within Defra's definition of food waste in its Simpler Recycling reforms.

[3] Independently certified compliant with BS EN 13432, BS EN 14995 or ASTM D6400 in the case of industrially compostable products. Independently certified compliant with EN 17427, AS 5810-2010, NF T51-800 or TÜV Austria's certification scheme requirements for home compostable products under their 'OK compost HOME' scheme. **See Annex A for guidance on how to check whether a product has suitable independent certification.**

4. **Packaging and non-packaging product formats[4] other than tea bags and those in 3 above,** and which are independently certified compliant with one of the standards for **industrially compostable** items and/or one of the standards[3] for **home compostable** items. *(Note: these may consist of compostable plastic, paper, card, mycelium, other compostable materials, or a combination of them, may be pigmented and likely to carry printed or embossed information.)*

5. **Newspaper[5] or plain paper used for lining kitchen caddies / food waste bins** *(present as a low number of newspaper sheets around or in amongst food waste, not wadges of newspaper only).*

6. **Other:** (add description of any TM category not included in categories 1 to 5 above or moved from the NTM guidance list to an additional TM category above).

Note: If your facility targets used compostable packaging products and is registered as a reprocessor of such products under the Extended Packaging Producer Responsibility System (known as EPR), it will be necessary to categorise, weigh, record and report compostable packaging in a way that is compliant with EPR reporting requirements applicable to facilities that 'reprocess' (organically recycle) compostable packaging.

Guideline **Non-Target Material** (NTM) sub-categories

1. **Plain paper** and **cardboard** items, e.g. paper tissues, paper napkins, paper towels, toilet roll and kitchen roll tubes, egg boxes with labels removed and plain corrugated cardboard.

2. **Newspaper not used for kitchen caddy/food waste bin lining purposes**, and shredded or unshredded white paper.

3. Ash from household wood- or multi-fuel burners and fireplaces[6].

4. **Textiles** consisting of only of non-dyed, naturally synthesised materials or which are independently certified compliant with one of the standards for **industrially compostable** items.

5. **Other**: (add description of any NTM category not included in categories 1 to 4 above or moved from the TM guidance list to an additional NTM sub-category above).

Guideline **Physical Contaminants** (PCs) sub-categories

1 Glass

2 Metal

3 Plastic bags, liners, and sacks: those not independently certified compliant with one of the standards for industrially compostable items and/or one of the standards for 'home compostable' items[3].

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[4] Excluded from this sub-category are industrially compostable absorbent hygiene products. REA has not yet seen evidence that the whole of any such product is independently certified industrially compostable and it would not be appropriate for them to be home compostable.

[5] REA regards newspaper (a type of non-plain paper) as suitable for composting because the UK's newspaper industry widely uses inks that are soya based or that contain low concentrations of potentially toxic elements.

[6] This is assumed to be ash from wood suitable for domestic use, see https://www.gov.uk/guidance/selling-wood-for-domestic-use-in-england.

4   **Other plastic items**: plastic packaging, and any plastic items other than in 3 above, that are not independently certified compliant with one of the standards for industrially compostable items[2] and/or with one of the standards for home compostable items[3].

5   **Paper** items and paper-based multi-material items that are not plain (are bright, glossy, shiny, pigment coloured and/or printed with ink) and that are not independently certified compliant with one of the standards for industrially compostable items and/or one of the standards for home compostable items[3], e.g.
   - plastic-lined paper bags,
   - plastic-coated paper plates,
   - glossy magazines and catalogues,
   - foil-coated paper, any other shiny / glossy paper or printed with inks.

6   **Cardboard** and cardboard-based multi-material items that are not plain (are bright, glossy, shiny, pigment coloured and/or printed with ink) and that are not independently certified compliant with one of the standards for industrially compostable items and/or one of the standards for 'home compostable' items[3, 7], e.g.
   - plastic-or foil-coated cardboard,
   - milk / juice cartons,
   - cereal boxes,
   - washing powder boxes,
   - frozen food containers,
   - take-away containers,
   - other shiny / glossy cardboard, printed with inks or coloured with dyes.

7   **Inert materials** such as stones, pieces of brick, concrete, ceramics and tiles.

8   **Absorbent hygiene products**, e.g. nappies and maximum absorbency garments.

9   **Textiles other than those in NTM sub-category 4**

10 **Other:** (add description of any PC sub-category not included in categories 1 to 9 above).

4.3 Sorting of the sample's contents

4.3.1 Loose biowaste

Appropriate PPE should be worn to carry out this activity, see section 2.

Pick PC from the sample, e.g. by using litter picking equipment, and separate it from TM and NTM (as described in section 4.1). Then, pick NTM from the sample and separate it from TM and PC.

Identification may be done by visual assessment and using the guide in Annex A for identifying certified industrially and/or home compostable items. Equipment and/or appropriate chemical substances could additionally or alternatively be used for identifying some materials that may be present in the sample[8]. If a chemical substance is used for identifying a material, weigh and record the material item's / fragment's mass before the chemical is applied to it.

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[7] Assume that any tape on a non-compostable item will also be non-compostable.

[8] Such equipment and chemicals are not listed in section 2 nor does this guidance cover health & safety considerations for use of chemical substances.

4.3.2 Bagged biowaste only

Appropriate PPE should be worn to carry out this activity, see section 2.

A sorting table should be set up to facilitate sorting of bagged biowaste. One way to do this is to place two open wheeled bins opposite each other and lay a sheet of wood between them to act as a sorting table.

Manually split the bags. The sample for assessment is the split bags, their contents and any loose biowaste that was selected, using method C (see 3.1.3).

Pick Physical Contaminants from the sample, e.g. by using litter picking equipment, and differentiate them from Target Material and Non-Target Material (as described in section 4.1). NTM shall be picked from the sample and differentiated from TM and PC.

Differentiation may be done by visual assessment and using the guide in Annex A for identifying certified industrially and/or home compostable items. Equipment and/or appropriate chemical substances could additionally or alternatively be used for differentiating some materials that may be present in the sample[9]. If a chemical substance is used for identifying a material, weigh and record the material item's / fragment's mass before the chemical is applied to it.

Transfer the sample's biowaste (TM) content into the wheeled bin(s).

4.4 Analysis of the final sample

4.4.1 Analysis of total TM, total NTM and total PC in the final sample

When this operation has been completed, the three different categories (TM, NTM and PCs) should be weighed in wheeled bins or bags, and the final weights recorded. For each of TM, NTM and PC the weight of the wheeled bin or the bag(s) should be subtracted from the final weight of the material category's total.

Express the results as follows:

$$TM \% \, w/w = \frac{W_{TM}}{W_S \times 100}$$

Where:

- ✓ TM % w/w is the percentage by weight of Target Materials in the final sample;
- ✓ W_{TM} is the weight of all the Target Material fractions in the final sample; and
- ✓ W_S is the weight of the final sample.

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[9] Such equipment and chemicals are not listed in section 2 nor does this guidance cover health & safety considerations for use of chemical substances.

As the aim of sample-taking is that the sample assessed is representative of the sampled load(s) or part-load, the TM % w/w in the sampled load(s) or part-load (excluding any bulky biowaste items) should be assumed the same as the % TM in the assessed sample.

$$NTM \ \% \ w/w = \frac{W_{NTM}}{W_S \times 100}$$

Where:

- ✓ NTM % w/w is the percentage by weight of Non-Target Materials in the final sample;
- ✓ W_{NTM} is the weight of all the Non-Target Material fractions in the final sample; and
- ✓ W_S is the weight of the final sample.

As the aim of sample-taking is that the sample assessed is representative of the sampled load(s) or part-load, the NTM % w/w in the sampled load(s) or part-load (excluding any bulky biowaste items) should be assumed the same as the NTM % w/w in the assessed sample.

$$PC \ \% \ w/w = \frac{W_{PC}}{W_S \times 100}$$

Where:

- ✓ PC % w/w is the percentage by weight of Physical Contaminants in the final sample;
- ✓ W_{PC} is the weight of all the Physical Contaminant fractions in the final sample, and
- ✓ W_S is the weight of the final sample.

As the aim of sample-taking is that the sample assessed is representative of the sampled load(s) or part-load, the PC % w/w in the sampled load(s) or part-load (excluding any bulky biowaste items) should be assumed the same as the PC % w/w in the assessed sample.

After doing the calculations, make sure the percentages of TM, NTM, and PC add up to 100 %. Each of these should be reported in the Annex B (Excel) Biowaste Assessment Report Template's worksheet A.

4.4.2 Analysis of material fractions in NTM and PC

If appropriate, fractions in each of the Non-Target Material and Physical Contaminant categories should also be analysed so they are sorted into their appropriate sub-categories.

To do this, separate the Non-Target Materials into their sub-categories (as listed in section 4.2.1 or as per the facility's adapted NTM sub-categories list) and weigh the NTM fraction in each sub-category.

Once this analysis is complete, report the mass of each weighed NTM fraction in the corresponding cell in the Annex B (Excel) Biowaste Assessment Report Template's worksheet 'C-Total NTM'. When added up, the total percentage by weight of all the NTM fractions should be the same as the total percentage by weight of NTM in the assessed sample before its sub-

categories were analysed (see 4.3.1). The worksheet includes cells and formulas that enable this to be easily checked.

Do the same as described above in this section for analysing and reporting fractions in each of the PC categories. Annex B's worksheet 'B-Total PC' includes cells and formulas that enable the same kinds of checks for PC fractions as instructed above for NTM fractions.

Packaging and non-packaging items that are empty or contain little food residue weigh relatively little; plastic bags and liners are a good example. Consequently, operators may find it useful to also count and record the number of non-compostable plastic bags and liners in the final sample.

Counting and recording the number of non-compostable plastic bags / liners is recommended because costs associated with removing them are high relative to their weight. Additionally, PAS 100 and PAS 110 set stringent limits on plastic (of any kind) ≥ 2 mm (in any dimension) in compost; this makes removal of non-compostable plastic bags/liners critical, with front-end removal aiming to reduce their concentration to As Low As Reasonably Practical. This counting and recording can provide useful information when discussing feedstock quality with biowaste suppliers, e.g. 3 % w/w non-compostable plastic bags by weight does not sound much but equates to approximately 3,500 bags / tonne and provides a reference which biowaste suppliers can easily understand. The number of non-compostable plastic bags / liners in the sample can be recorded in notes on Annex B's worksheet B.

If the operator's facility's policy is to front-end reject compostable plastic bags / liners as well as non-compostable ones, the operator may find it useful to count and record the number of all plastic bags and liners in the sample, i.e. the compostable ones and the non-compostable ones.

Documenting the analysis using photos can also be useful for understanding biowaste composition. Photos add details that reported weights, percentages and bag/liner-count numbers do not capture.

4.4.3 Recording and reporting

Annex B provides Excel worksheet templates that should be used to report the results and other relevant information about the assessment:

- Worksheet A – Total TM, NTM and PC
- Worksheet B – Total PC and Subcategories
- Worksheet C – Total NTM and Subcategories
- Worksheet D – Bulky Waste
- Worksheet E – Calculated Rejects

Annex C shows an example of a physical contaminants chart that can be generated and updated by entering the results of biowaste assessments in the table in the Excel worksheet. The table and chart can be used to monitor the results for a specific waste source over time.

5. Changes since last version

- Revised this document's details on sampling methodologies and changed how much final representative sample should be obtained.
- Updated list of standards for industrially compostable and home compostable packaging and non-packaging products, referred to in page 8's footnote 3.
- Revised list (see 4.2.1) of Target Materials (formerly 'Compostable Materials') and Non-Target Materials (formerly 'Non-Compostable Materials'). List has become split into three categories; Target Materials, materials that are Physical Contaminants (PC) at all biowaste treatment facilities, and Non-Target Materials (that could be fed in but are decided on a facility-by-facility basis depending on its authorisations, quality management policies and contracts with biowaste suppliers.
- Added instruction that the facility operator reviews and adapts the guideline list's TM, NTM and PC sub-categories where necessary (see 4.2.1). This broadens application of the methodology so it is flexible enough for all composting facility types to use and can also be used by other types of facilities that receive and process biowaste solids, e.g. AD facilities and integrated AD and composting facilities.
- Expanded suggestions for analysis to include photographic documentation.
- Added instructions to remove and record bulky waste before taking final sample.
- Added worksheet (part of Annex B) that calculates weight and % w/w of rejects (excluding bulky waste), using figures from other worksheets in that annex.

6. Acknowledgements

AfOR, TEG Environmental and Novamont staff
sorting materials from a sample of bagged food wastes.

Annexes

Annex A: Compostable Certification Marks
Annex B: Biowaste Assessment Report Template
Annex C: Chart Creation