

## TCEP-P 02.- Preparation of PET Articles for Evaluation

### Background

The recycling Test for innovation in packaging involves comparing the recycle performance that contains such an innovation against a control article approved for recycling that does not contain the new design or composition feature.

This practice lists the steps taken to prepare a test article for evaluation of the different composition or design features:

- Specimens with attached labels or direct printed labels
- Lidding films printed, unprinted or labeled
- Multilayer structure that could be compatible with the recycling
- Other chemical components to improve the performance of the packaging (eg. barrier, anti-fog, antiUV, slipping agents, melt enhancer, etc.).
- Attachments (e.g. soak pads, wraps, paper, cardboard, cushion bubbles, etc.)
- Other innovation that could affect the quality or performance of the recycling

Evaluations should involve the “innovation sample” feature and/or a kind of “generic sample” feature.

- An "innovation sample" is prepared according to what is expected to be sold in the market using exactly the same products and composition as it will be marketed.
- A "generic sample" is one made on purpose, that represent a variety of existing market products and represents an average of what will be commercialized. To determine these averages, a range of articles in the market were evaluated for weight and compositions to determine and average % by weight or % area that could be acceptable.

As an example, one might:

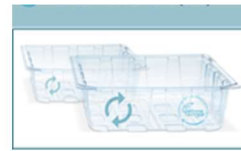
- Test a specific thermoformed tray using a new additive to improve the barrier properties of the packaging.
- Test a generic specimen made with the blend of same tray without such an additive blended with the innovation as the expected % as market target.

### Control articles

The control resin is used to make control articles that are used in testing. These control articles are usually films, sheet or thermoformed containers that reflect the expected use of the design feature being evaluated.

#### Control article preparation

- For evaluations it involves design features such as resins, additives, layers, or coatings, the use of a listed control resin is recommended for efficiency and to ensure consistency when molding a control article.
- However, the control article can be made with an unlisted control resin that has been qualified by testing according to TCEP-P-01.



- When only labels, lidding or attachments are being evaluated, a listed control resin can be used, or an unlisted resin can be qualified by testing. The unlisted but alternate qualified resin may be used for both control article and test article if desired.

Preparation of articles

- The intended design feature is applied to a container and test articles are blended with control articles at a 25% or market representative volumes dully documented.
- Any specimen with top lidding film needs to be tested to understand the impact on the final recycling stream. For that purpose, the specimen test have to contain all the features as it will looks like in the final packaging as it will be commercialized.

Test specimens with all their features (lidding film, labels and other inserts) will be compared to control samples with similar features that have demonstrated as acceptable in recycling stream.

**DOCUMENT REVISION HISTORY**

| Version | Publication Date | Revision notes                            |
|---------|------------------|---|
| V0      | Sept -21         | NEW DOCUMENT                              |
| V1      | April-23         | Platform, document name and logo changes. |
|         |                  |   |