



Food Safety and Efficacy
Considerations for Recycled Plastics
for Use in Sustainable Food
Packaging (PET)

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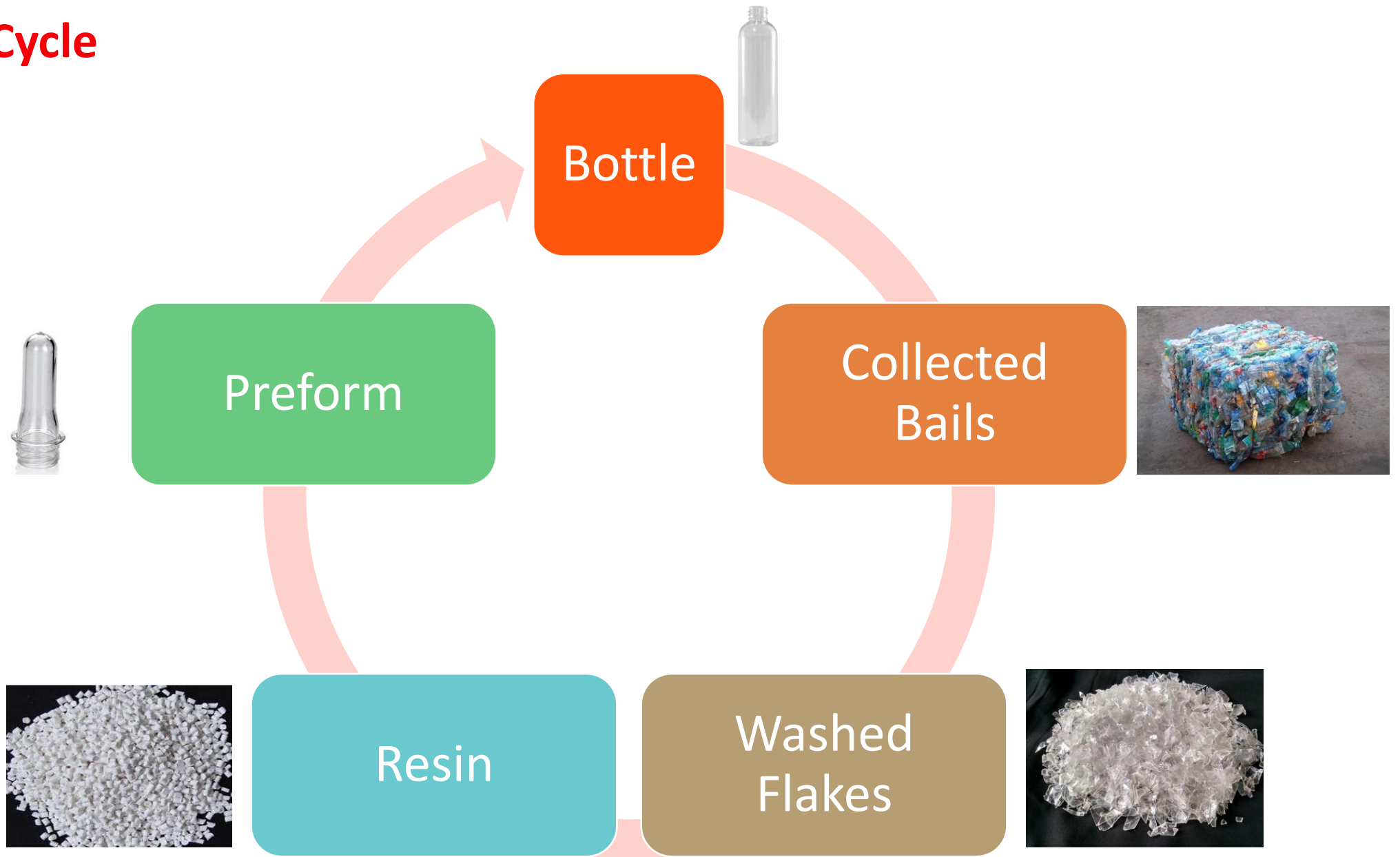
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PET Facts

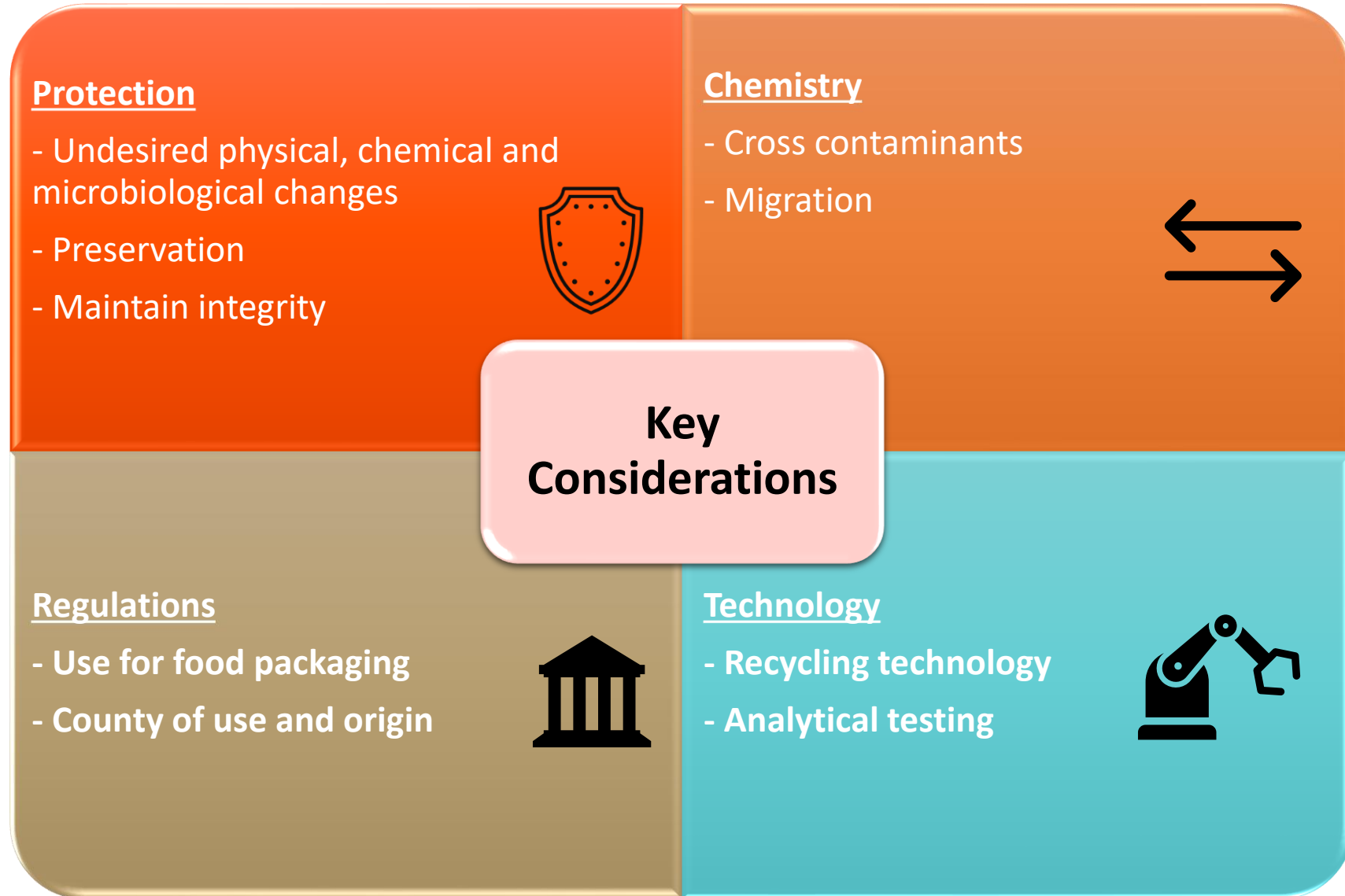
- PET : Polyethylene terephthalate identified by the #1 resin code symbol.
- PET is widely used around the world for packaging foods and beverages.
- PET is approved as safe for food and beverage contact by FDA and health safety regulatory authorities throughout the world.
- Extensively studied, tested and used without incident for more than 40 years.
- PET is fully recyclable and the most recycled plastic in the worldwide.
- Life cycle analyses of PET have consistently confirmed the environmental benefits of PET compared to other packaging as a packaging material.
- Several countries permit **rPET (recycled PET)** as packaging material for food & beverages.



PET Life Cycle

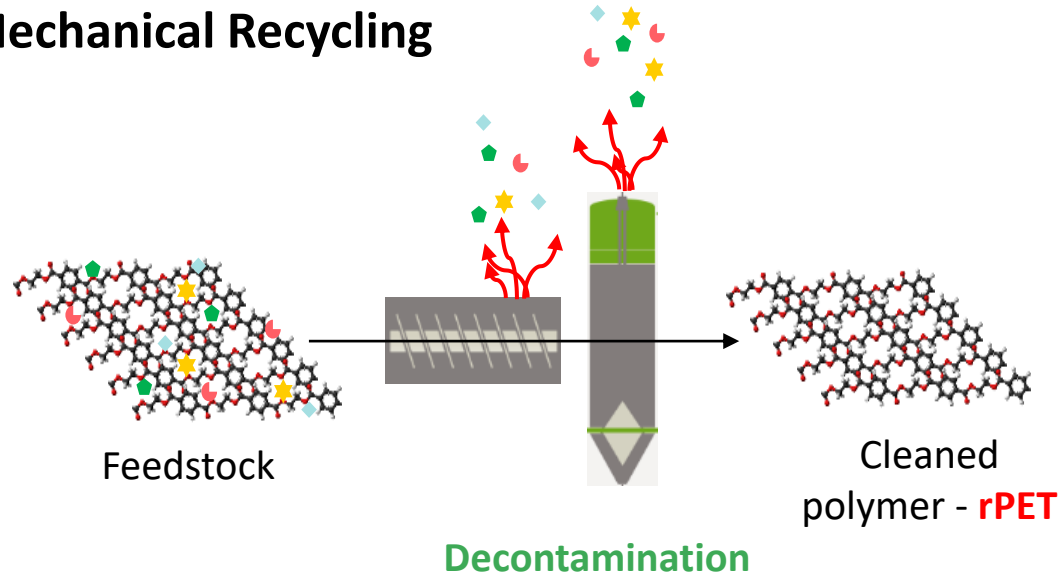


rPET – Recycled PET for Food Packaging



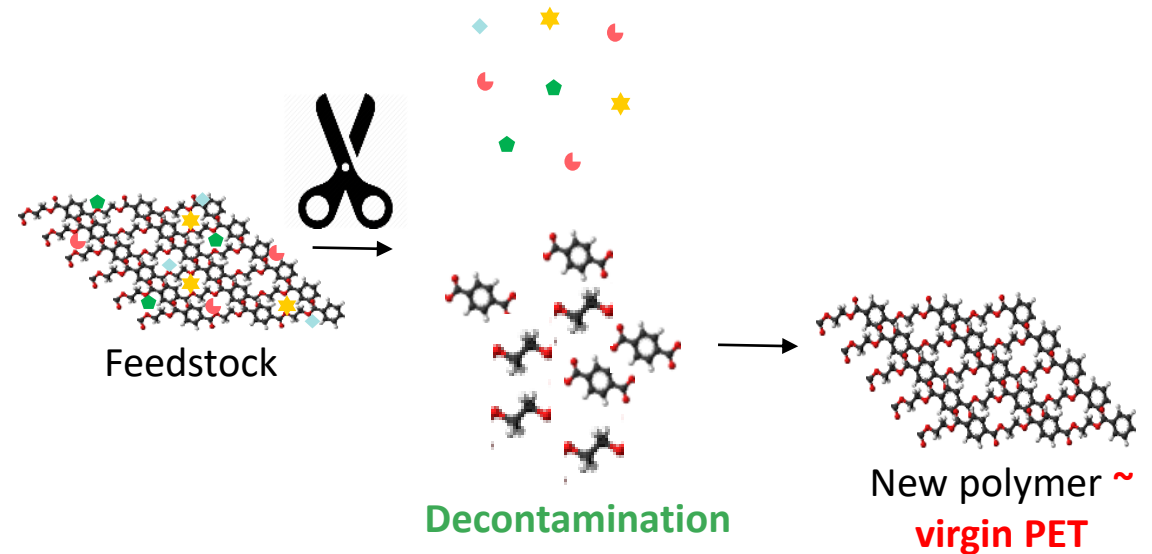
How is rPET Produced

Mechanical Recycling



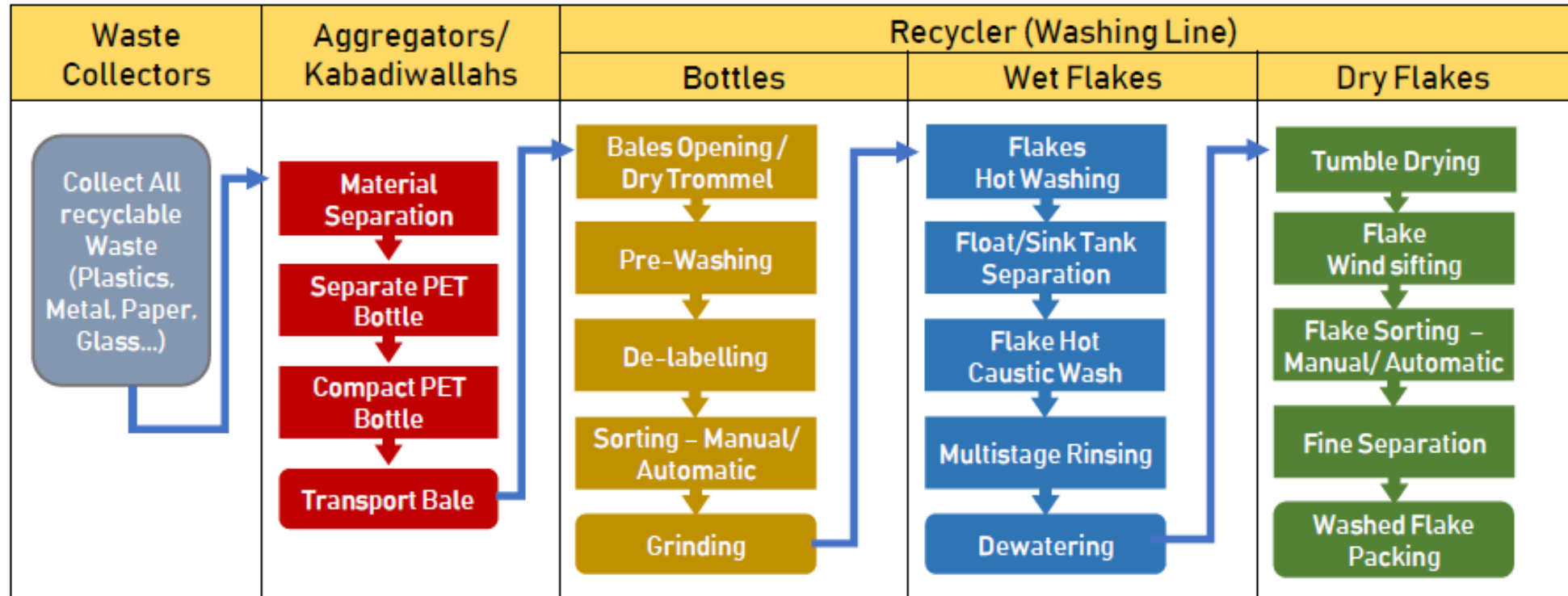
Recycled PET mechanical decontamination: A process that consists of decontaminating washed and sorted flakes via grinding, melting, and reforming plastic packaging material. The basic polymer is not altered during the process.

Chemical Recycling

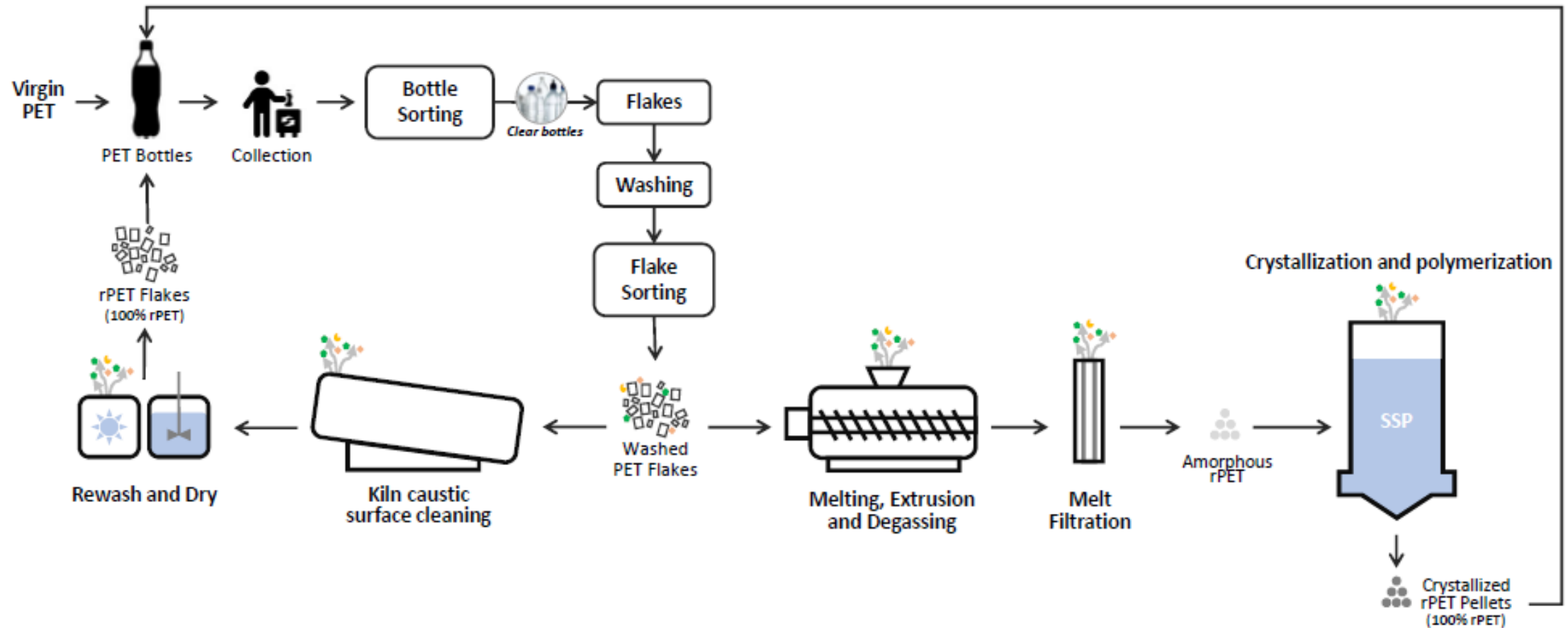


Recycled PET chemical decontamination: The depolymerization of washed and sorted PET flakes back to original components such as Ethylene glycol (EG) PET oligomers (monomer) with partial glycolysis, The output of this process is considered as virgin PET

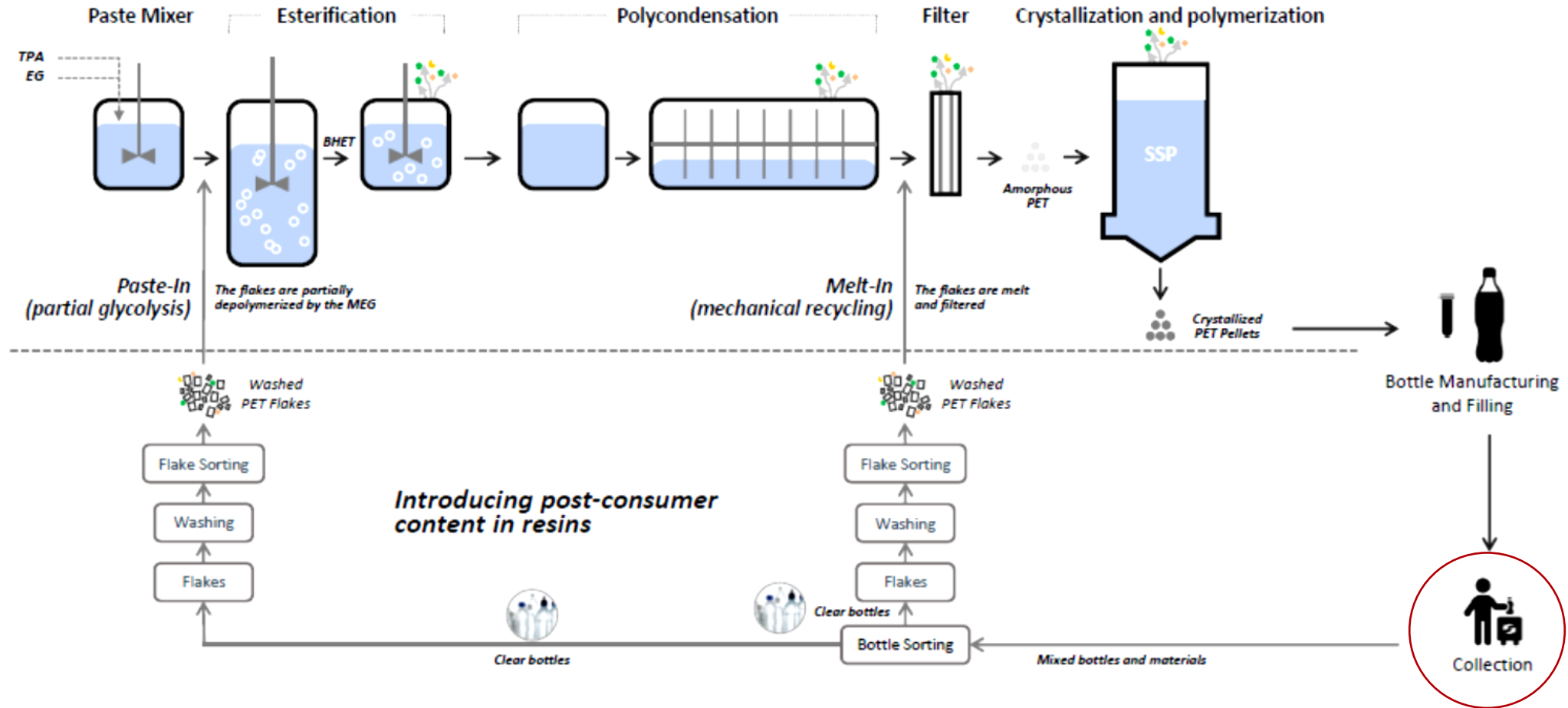
Preparation Stage – Prewash and flaking



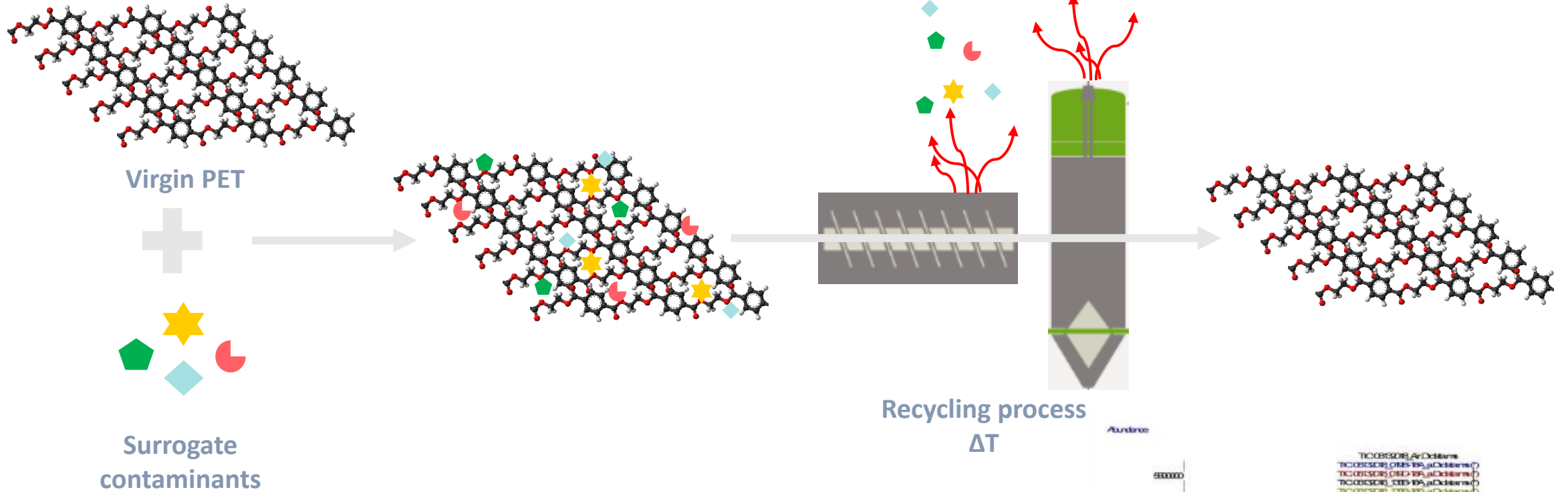
Mechanical Recycling



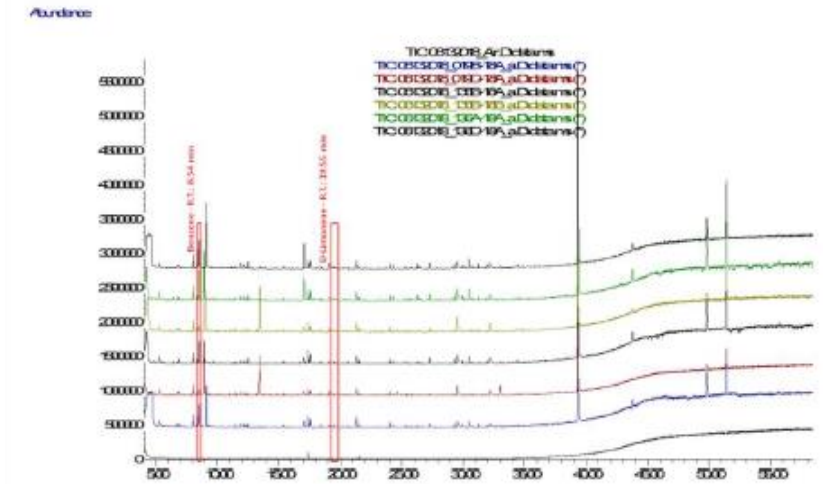
Chemical Recycling



Food Safety : Technology Challenge Study



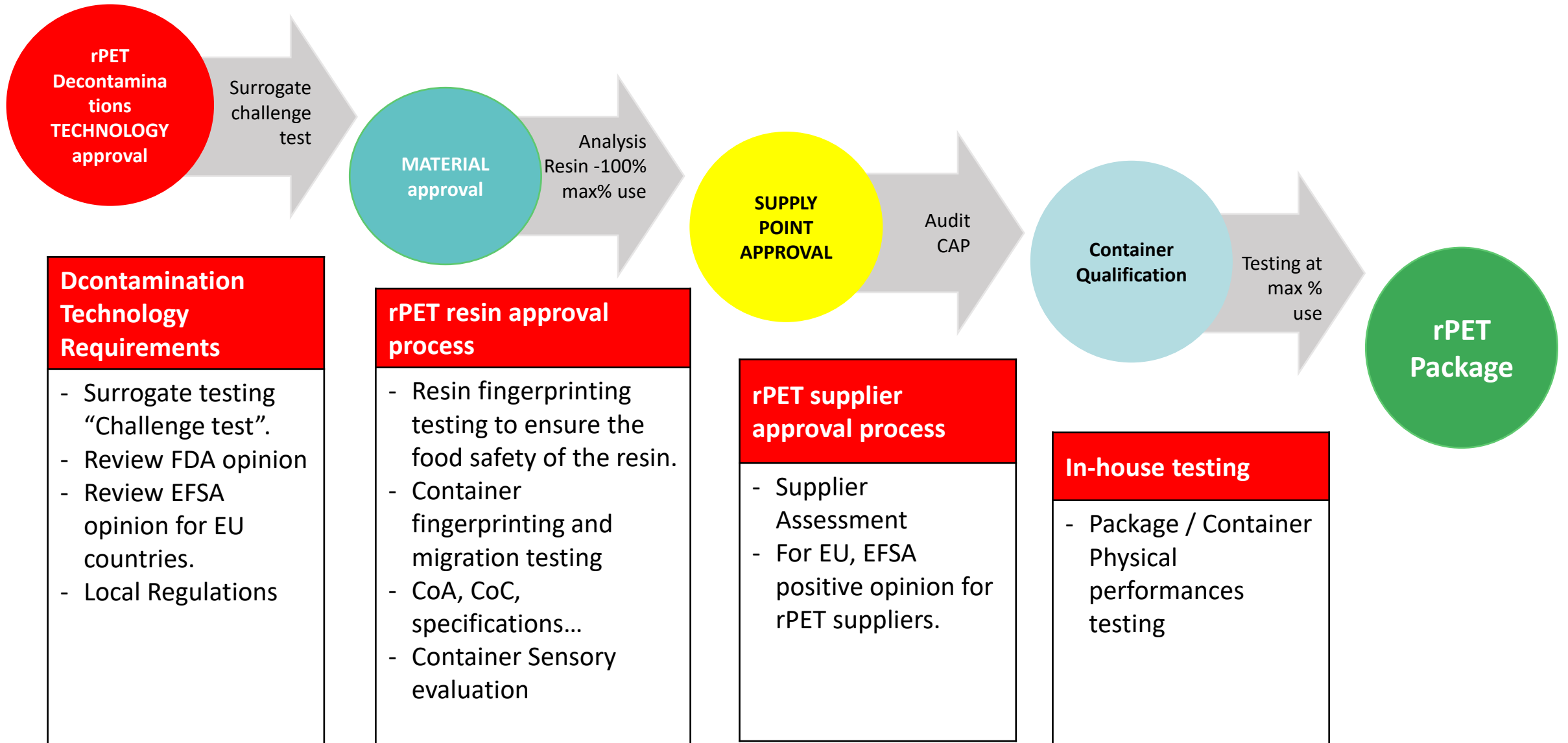
Decontamination efficiency of recycling process



Resin Fingerprinting

Classified – Internal use

Key Steps for Recycled PET Approval





WORLD WITHOUT WASTE GOALS

DESIGN



100% RECYCLABLE PACKAGING BY 2025 & 50% RECYCLED CONTENT BY 2030
VIRGIN REDUCTION GOAL

COLLECT



100% COLLECTION AND RECYCLING GLOBALLY BY 2030

PARTNER



WORK TOGETHER WITH INDUSTRY AND NGOs



“Food is generally recognized as safe because of its origin – until it is proven unsafe.

But it is the opposite for packaging materials. Because of **packaging materials are often regarded unsafe** until you prove that they are safe.”