02/07/2024 Press release

Siegwerk, Greiner and Krones join forces in a thought-provoking recycling initiative

Siegwerk teams up with Greiner and Krones to demonstrate state-of-the-art washing capabilities to recycle “non-recyclable” direct-printed polypropylene (PP) and polystyrene (PS) cups.



Siegwerk, Greiner Packaging and Krones have joined forces in a thought-provoking initiative that highlights the capabilities of state-of-the-art recycling facilities in the conversion of direct-printed PP and PS cups. Despite being considered non-recyclable by some Design for Recycling Guidelines, the three companies were able to effectively deink and convert the rigid containers into high-quality white recyclates, without the need for altering the ink formulation or print design. This was achieved by utilizing hot caustic washing, a standard process for PET bottle recycling that is increasingly adopted also by recyclers who are working with polyolefin (PO) and PS rigid streams.

The findings underscore the need for guidelines to evolve with technological advancements in recycling, ensuring they reflect the most efficient and sustainable routes to a circular packaging economy. The project partners

advocate for a reevaluation of the role of printing inks and coatings in recycling, calling for a broader assessment of packaging deinkability under standard hot caustic conditions and adoption of the corresponding test standard published under DIN SPEC 91496.[1] This viewpoint is well aligned with the position paper recently issued by EuPIA.[2]

For detailed information on the project, its methodology and findings, please refer to the full document.

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