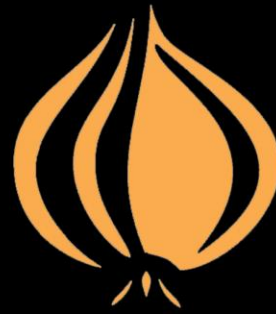


EXPERTS IN
PLASTIC
WASTE
UPCYCLING



FYCH

Recycling Technologies

Our team



ANDREA is Chemical Engineer and has worked for 4 years in the development of new technologies to upgrade the recycled plastics quality and increase the plastics recyclability.

OKSANA is PhD in Chemical Engineering and has worked for the last 5 years in the plastics recycling sector, improving the mechanical recycling process efficiency and developing new technologies to improve recycled plastics quality.

ANDRÉS is Full Professor at the Chemical Engineering Department of the University of Alicante. He has been researching in the field of plastics circular economy for the past 10 years. He is the patent inventor of [Cadel Deinking](#) process.



Andrea Cabanes:
CEO

Oksana Horodytska:
COO

Andrés Fullana:
Scientific specialist





A spin-off company from the University of Alicante dedicated to develop and commercialize **innovative recycling technologies**

Value proposal: decrease the quantity of plastics discarded in **landfills** using an **innovative technology** to recover valuable materials from packaging that today cannot be recycled, improve the recycled plastics quality, **expand their market** and contribute to the **circular economy**.

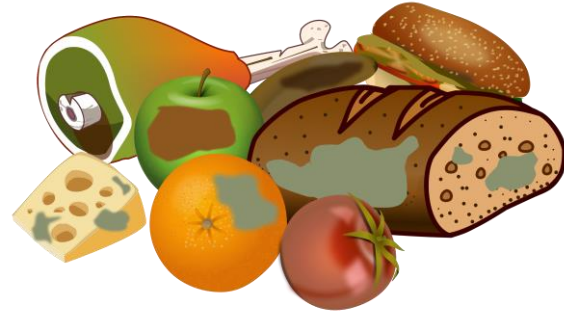
OFF-ODORS IN POST-CONSUMER PLASTICS



RECYCLING OF MULTILAYER PACKAGING



OFF-ODORS IN POST-CONSUMER PLASTICS

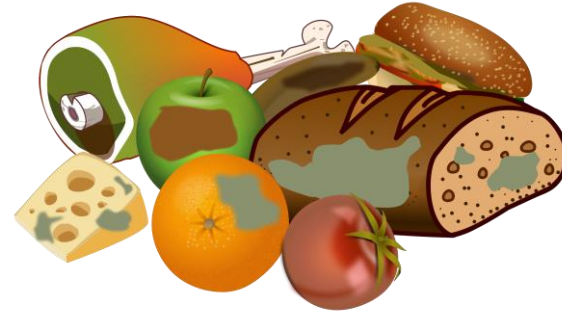


Disgusting



Unwanted

OFF-ODORS IN POST-CONSUMER PLASTICS



Disgusting



Unwanted

x10

Current status: TRL 5



Capacity
3-6
kg/batch



PS



LDPE, PP



HDPE, PP



Patented
Deodorization technology

Sensory reduction



16 084 OU/m³

(strong odor)



DEODORIZATION SYSTEM

> 96 % REDUCTION



576 OU/m³

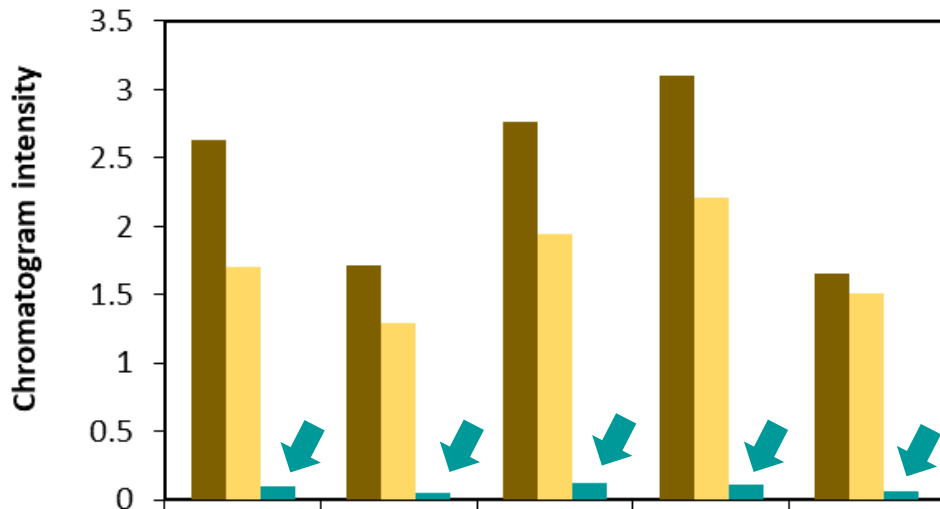
(weak odor)

Virgin HDPE 250 OU/m³

Odor-active substances reduction in post-consumer HDPE



FYCH's deodorization technology achieves a **96%** reduction of odorants



25 % Removal

VS.

96 % Removal



OCTOBER 2021



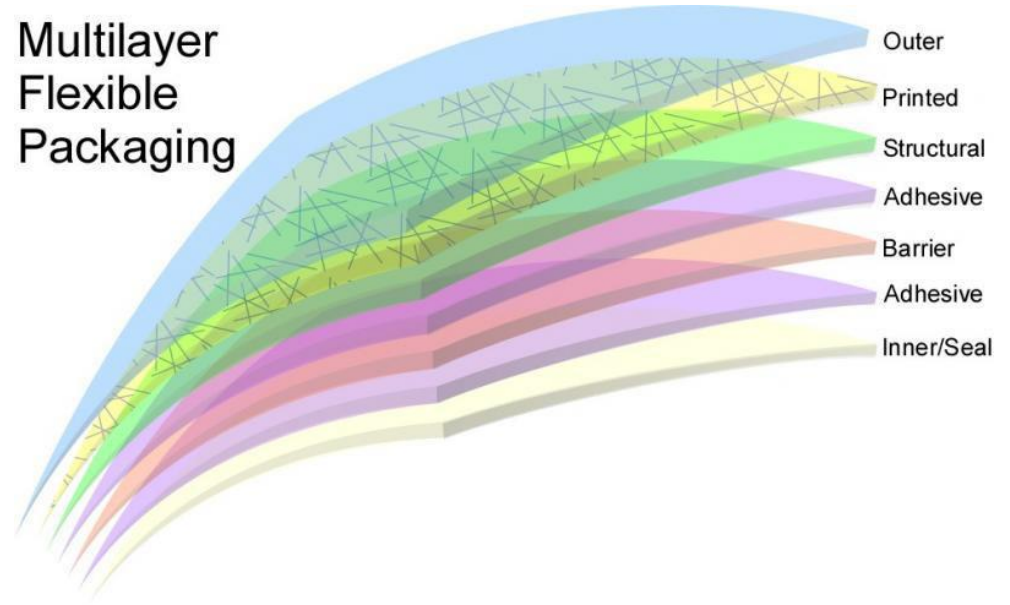
10 kg/h



RECYCLING OF MULTILAYER PACKAGING



Multilayer
Flexible
Packaging



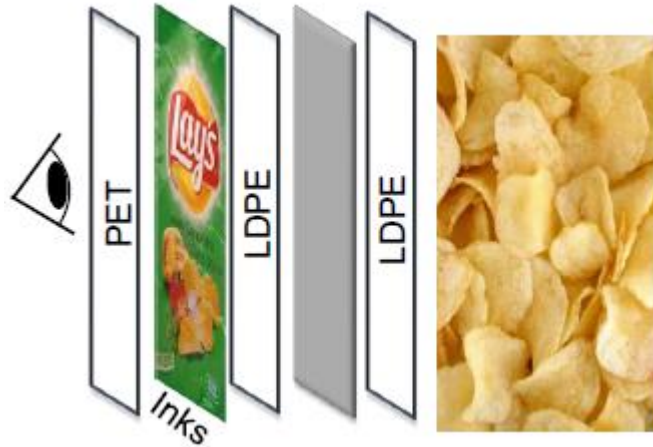
FYCH DELAMINATION TECHNOLOGY



Currently non-recyclable



Complex structure



Before



After delamination



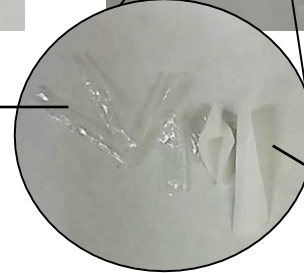
FYCH has developed a process that disassembles the various layers of multilayer packaging and remove the ink, adhesives, and ties.

FYCH holds the PATENT of “**Procedure for the removal of adhesives and/or interlaminar inks from the laminated plastic material**” and, thus, FYCH is the only company that can supply this technology.

Examples of delaminated + deinked packaging



Transparent



White

Examples of delaminated + deinked packaging



Examples of delaminated packaging

Tetra brick packaging



Poly-aluminum after hydropulping

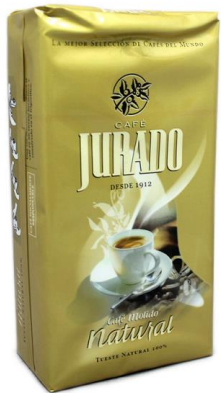


Recovered LDPE Aluminum



Examples of delaminated packaging

Coffee packaging



Recovered

PET

LDPE

Aluminum

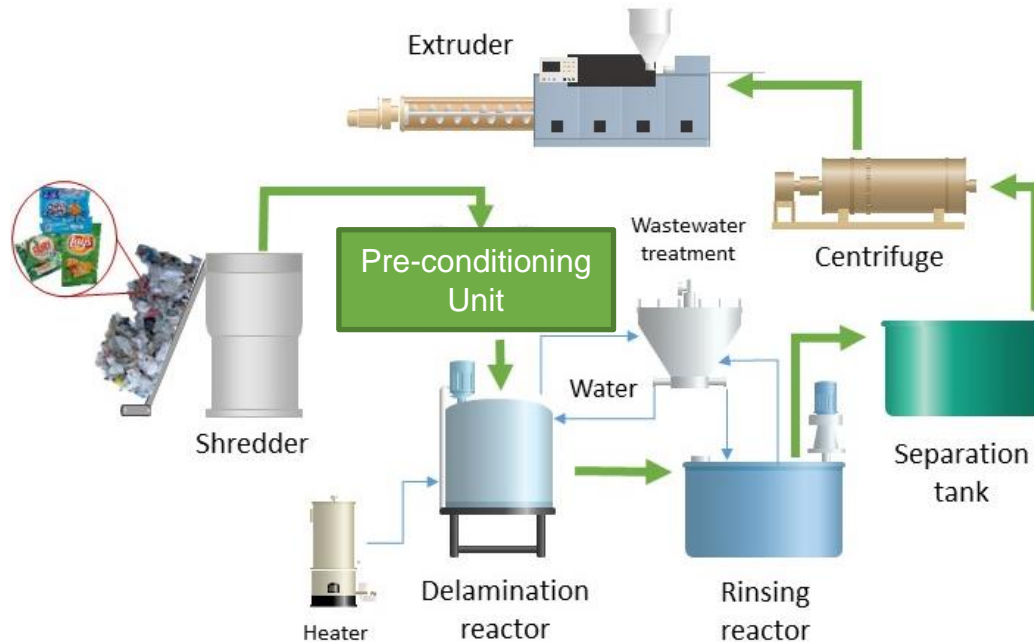


A water-based process with ZERO wastewater



Mechanical recycling process similar to a conventional washing process but with two **INNOVATIONS**:

1. A pre-conditioning step where **multiple access points** are created to facilitate the inlet of the delaminating solution to the tie/adhesive layers.
2. The **delamination water-based solution consisting of commercial non-hazardous reactants**.



Patented
Delamination technology



Current status: TRL 5



1st PILOT TEST in May 2021
500 kg Thermoformed
PET/PE trays



FYCH

Bringing Innovation to Plastics Recycling

FYCH Technologies

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