



DESIGN AND DEVELOPMENT OF A DEMONSTRATIVE RECYCLING LINE FOR THE SEPARATION OF POST-CONSUMER POLYOLEFIN MIXTURES

GRANT AGREEMENT: LIFE10 ENV/ES/000460

ACTION 3: PRE-TREATMENTS POST- CONSUMER POLYOLEFIN MIXTURES





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Responsible Beneficiary : SMSA

Duration: 9 months

Objectives:

- Definition the suitable washing treatments for polyolefin mixture.
- Get the pretreatment material suitable for recycling line
- Characterization of polyolefin mixtures

Deliverables involved during this action:

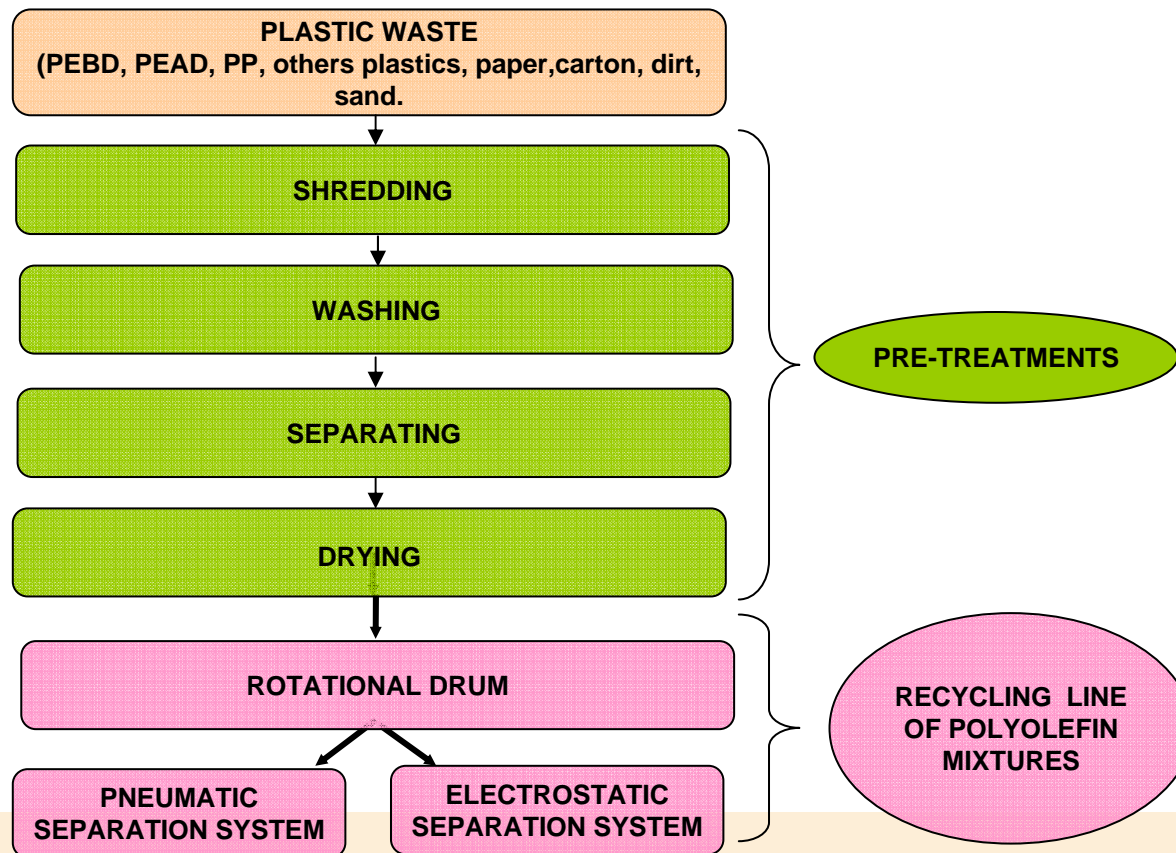
-D.3.1: Report of pre-treatments required for the samples tested (Month 13)



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First stage of the action: Study of the different types of pre-treatments

Scheme systems for pre-conditioning of polyolefin mixes





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First stage of the action: Study of the different types of pretreatments

Different systems for pre-conditioning of polyolefin mixtures are being studied:

- Shredding
- Washing
- Separating
- Drying



Extensive experience of partners: PHB and SMSA



Contact with several companies



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SHREDDING

Objective: Reduce the size of the material to flakes.





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WASHING MACHINE

**Objective: To remove organic impurities such as paper, carton, dirt, sand.
Tests carried out by the washing with water, soap and/or solvents.**





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SEPARATING

Objective: Separate via float / sink method the floating fraction (polyolefin) from the plastic material with specific weight > 1 (PS, PET, PVC, etc...) and of a large part of the paper and carton.





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DRYING MACHINE

**Objective: To remove the maximum possible amount of moisture
Moisture Polyolefin Mixtures (0.1-0.5 %)**





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**First stage of the action: Study of the different types of pretreatments
Month: April**



**Second stage of the action: Testing with different types of pretreatments
Month: August**



**Third stage of the action: Characterization of polyolefin mixtures
Month: September**



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