# **Pack2theLoop – Closing the circle of polyolefin packaging**

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# **GOALS:**



**Development of quality ensured recyclates from post consumer packaging** Ensuring processability (mechanical), safety assessment (chemical and biological).

### **Demonstration of the closed loop with Use Cases**



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Establishment of "**Design for/from Recycling**" key for future and recyclable packaging

**Result:** Handbook with experience results and holding of a joint expert meeting with stakeholders and interest groups.

Developing a common language of the plastics/waste management/recycling sector through cooperation along the entire "plastics" value-added cycle.

## **Catalogue of requirements:**

The circular diagram shows an excerpt of a) the recyclate families currently used by the which partners, project of consist packaging manufacturers, fillers and





#### **COMMITTEE:**



distributors, as well as b) the processing methods and c) manufactured

The cause-effect diagram shows an overview of the problems identified.



# **HIGHLIGHTS OF THE 1st YEAR OF RESEARCH:**



# MFR comparison

0,5 3,78 60 PP(DB) HDPE(DB) PP(C), pearl PP(C), grey

### **Toxicological analysis:**

In the case of the yoghurt cups, there was hardly any misuse by consumers. **Biological contaminants** that

could lead to the growth of moulds and subsequently

Initial results of the Melt Flow Rate (MFR, 230° C, 2,16 kg) manually measurements on sorted PP and HDPE detergent bottles (DB) and closures (C) showed a wide spread of MFR values. During processing at the recycler, a wide variety of shapes with different MFRs are



Three different sorting analysis of the first year show 8,5% PP, 1,3%

PS, and 4,1% PE in Austrias seperate collection ("Gelber Sack/Tonne")



to the formation of mycotoxins were also investigated

and a worst-case scenario could be analysed.





mixed.



Ochratoxin A (Source: Wikipedia, 2021)



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