1. What is bio-plastic?



Bio-plastics consist of different types of renewable raw materials (selection):

- Blends of starch from maize or other crops (25 to 80 %) with plastic components
- Polylactide (PLA)
- Polyhydroxylalkanoate (PHA)
- Polybutylensussibat (PBS)
- Products of cellulose



2. What is allowed in compost?



- <u>DIN 13432</u>: after 10 weeks of composting only max. 10% of the material in pieces more than 2 mm is allowed in compost;
- The quality of the compost is specified in the German regulations, 0.1% dry weight is allowed. The special quality system of the German association BGK allows only 15 cm² of all impurities;
- The composting time in industrial composting plants in Germany varies between 4 and 8 weeks, so the time is not sufficient.



3. Examples of impurities



After fermentation or composting

- Small organic waste impurities
- Glass
- Coffee capsules or coffee pads with plastic pieces
- Toothbrushes, plastic bottles
- Flowerpots
- Different packaging material (nets, bags, medicine blisters)





4. Examples of small impurities



After the biological treatment:

Small pieces of impurities in the fine compost

 $0.05 \% / 0.5 \text{ cm}^2$ $0.5 \% / 3.8 \text{ cm}^2$ $0.05 \% / 13.5 \text{ cm}^2$









5. Tests on usable bio-plastics









Catering dishes after fermentation and composting



6. Tests on biodegradable plastics







Compostable coffee capsules

after fermentation and composting



7. Collection of organic waste in households



- No packaging material in composting systems!
- Collect organic waste in the kitchen using paper bags -- "Hamburg Bio-bag"













