

# Biodegradable plastics



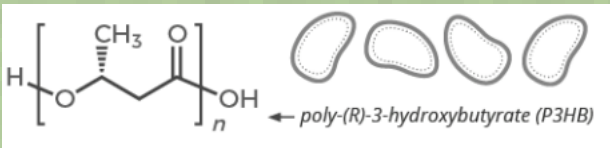
## Common biopolymers

### Poly(lactic Acid) (PLA)



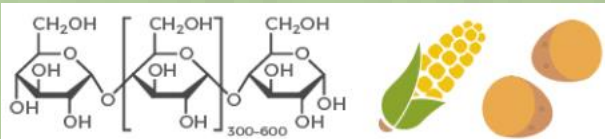
Obtained from fermented plant starch from corn, sugar cane or sugar beet

### Polyhydroxyalkanoates (PHAs)



Bacteria that produce it via fermentation of sugar or lipids

### Thermoplastic starches (TPS)



Starches from plants are heated with water, then mixed with plasticisers or other polymers



TPS waste bags



PLA food container, plastic films and bottles.



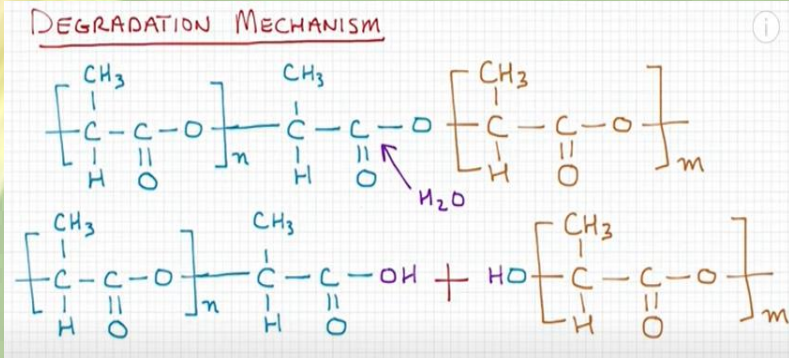
Plastic cutlery



Paper coffee cups p PLA lining for waterproofing



More expensive than plastics from fossil fuels. However, the greenhouse gas emissions for their production are lower.



Biodegradable via hydrolysis of the ester group