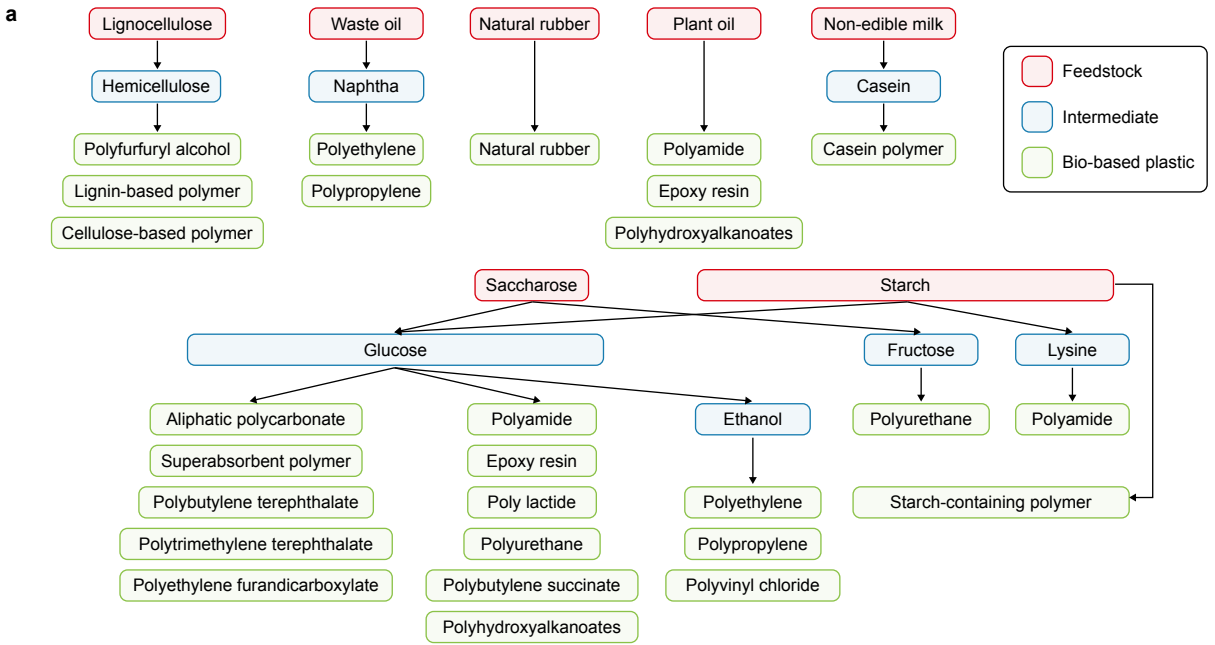
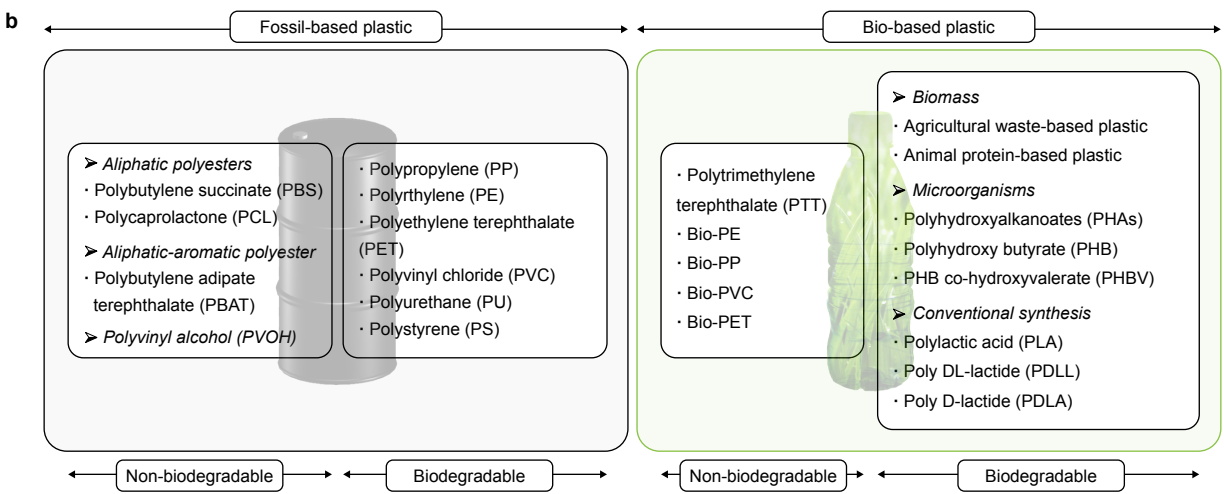

a
Lignocellulose
Hemicellulose
Polyfurfuryl alcohol
Lignin-based polymer
Cellulose-based polymer
Waste oil
Naphtha
Polyethylene
Polypropylene
Natural rubber
Natural rubber
Plant oil
Polyamide
Epoxy resin
Polyhydroxyalkanoates
Non-edible milk
Casein
Casein polymer
Feedstock
Intermediate
Bio-based plastic
Saccharose
Starch
Glucose
Fructose
Lysine
Aliphatic polycarbonate
Superabsorbent polymer
Polybutylene terephthalate
Polytrimethylene terephthalate
Polyethylene furandicarboxylate
Polyamide
Epoxy resin
Poly lactide
Polyurethane
Polybutylene succinate
Polyhydroxyalkanoates
Ethanol
Polyethylene
Polypropylene
Polyvinyl chloride
Polyurethane
Polyamide
Starch-containing polymer


b
Fossil-based plastic
Bio-based plastic
Aliphatic polyesters
· Polybutylene succinate (PBS)
· Polycaprolactone (PCL)
Aliphatic-aromatic polyester
· Polybutylene adipate terephthalate (PBAT)
Polyvinyl alcohol (PVOH)
· Polypropylene (PP)
· Polyrthylene (PE)
· Polyethylene terephthalate (PET)
· Polyvinyl chloride (PVC)
· Polyurethane (PU)
· Polystyrene (PS)
· Polytrimethylene terephthalate (PTT)
· Bio-PE
· Bio-PP
· Bio-PVC
· Bio-PET
Biomass
· Agricultural waste-based plastic
· Animal protein-based plastic
Microorganisms
· Polyhydroxyalkanoates (PHAs)
· Polyhydroxy butyrate (PHB)
· PHB co-hydroxyvalerate (PHBV)
Conventional synthesis
· Polylactic acid (PLA)
· Poly DL-lactide (PDLL)
· Poly D-lactide (PDLA)
Non-biodegradable
Biodegradable
Non-biodegradable
Biodegradable