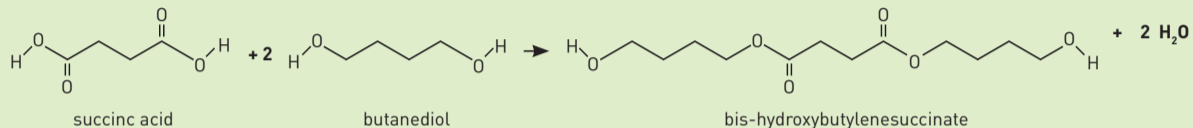


Figure 1: 2-stage PBS production process

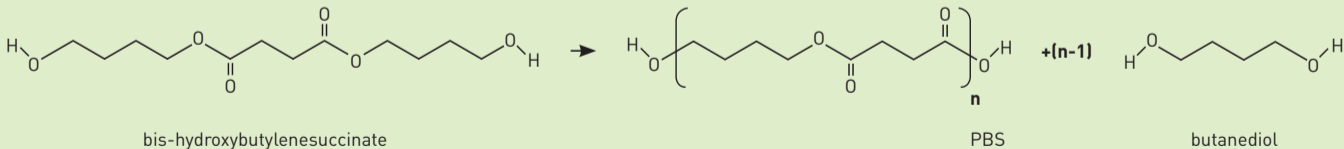
2 step reaction:

A) Esterification of succinic acid with butanediol:



- approx. 170 – 200°C, mole ratio approx. ca. 1.1 – 2.0 BDO/SAC

B) Polycondensation of bis-hydroxybutylenesuccinate



- approx. 200 – 240°C

- approx. 0.1 – 1 mbar