Biological macromolecules are heteropolymers

- Polymers - made of smaller building blocks - monomers - that are covalently joined together

- Homopolymers - monomers repeat, e.g. in a plastic

- Heteropolymers - monomers do not exactly repeat

- Different types of macromolecules are made of different types of building blocks

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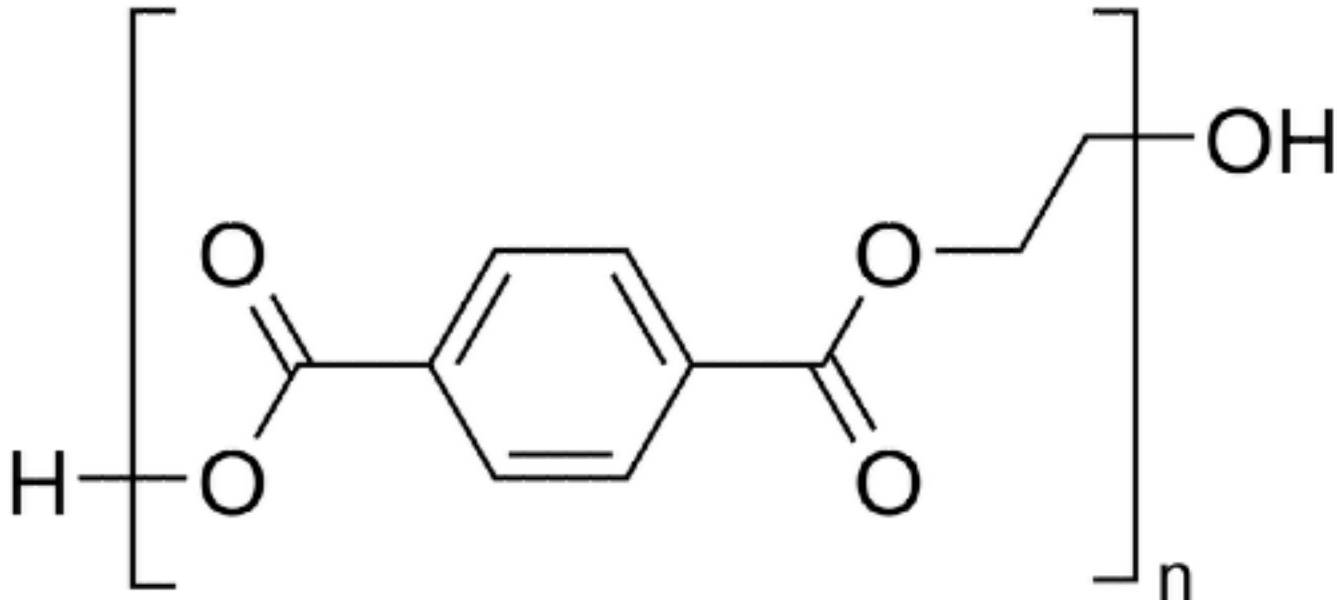

Polyethylene terephthalate, a homopolymer

https://commons.wikimedia.org/wiki/File:Polyethyleneterephthalate.svg

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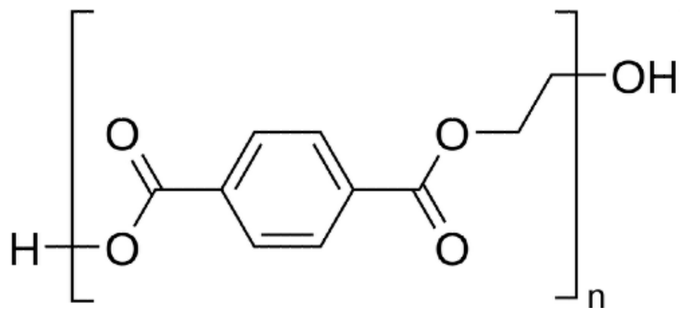

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The monomers are small organic molecules

- Proteins are made of
  - 20 standard amino acids
  - linked by peptide bonds
  - modifications, e.g.
    - post-translational modification
    - disulfide bonds
    - cofactors and prosthetic groups