

Competition Corner: Materials Evidence Bounds

g10_u07_w27

Use only printed material/recovery cards. Calculate from stated inputs, distinguish a repeat representation from a product specification, and qualify recycling or sustainability claims by program conditions.

1. A model chain is $[-\text{CH}_2 - \text{CHCl}-]_n$. Identify the repeat unit and explain what n does and does not specify.
2. Program Y reports 65% recovery from 600 kg of sorted card M. Calculate recovered mass and state why this does not describe a mixed collection stream.
3. Card R has 2 cross-link markers and load index 5; card S has 7 markers and load index 9. State a bounded comparison and a claim that the pair cannot support.
4. Critique: “Recyclable” on a classroom card means the material will be recovered everywhere with no other impacts. Replace it with a context-specific statement.
5. Name two additional variables required before a material card could support a broad environmental, consumer, product, or health claim.