

Curiosity Thread: Two Percentages, Two Questions

Curiosity Reading | CheAI Research Inc.

Purity asks, “How much of the starting material is modeled as the reactive substance?” Percent yield asks, “How much assigned product was obtained compared with the model’s theoretical product from that reactive amount?” A single record can have a modest purity and a high yield because the yield denominator deliberately starts after the purity correction.

1. Why does a 75% pure ore not automatically have a 75% yield?
2. Draw a denominator map for a purity calculation and a percent-yield calculation. Which mass appears in both, and which does not?
3. Why can product mass exceed the mass of one starting ingredient without violating conservation of mass?
4. Invent one data-check request for an apparent 103% yield that does not assume anyone did anything wrong.

All tasks use supplied data cards only. The packet’s frozen values and original model records are documented in `sources.md`.