



BNA 2026

Curie's Catalyst

Brief Study Guide

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BEEP—BEEP—BEEP. A deafening alarm claws through the air, vibrating through bone and thought alike. You were only wandering across BMI's campus. You weren't meant to hear this.

An unfamiliar voice cuts through the noise. "That alarm? Yeah... that's the BNA laboratory. An experiment went wrong. Temperatures spiked where they shouldn't have, conditions turned unstable, and something was formed that was never meant to. We evacuated immediately." The researcher exhales. "We're investigating, but we're short on hands."

You step closer.

Welcome to **Curie's Catalyst**, where chemistry joins hands with mystery and curiosity is both your compass and your curse. You are part investigator, part chemist, and entirely responsible for uncovering the truth hidden in scorched data and silent residues.

What remains of the incident is fragmented. The lab is sealed. Equipment is lost. Only four residue samples and an incomplete lab report survived the chaos. From these remnants, you must reconstruct the past. What reaction was intended? Where did it go wrong? What catalyst tipped the balance into disaster?

Your investigation begins with deduction. Delegates will receive the fractured lab report, riddled with broken reaction equations, time-temperature graphs, redacted notes, cryptic riddles, and spectroscopic clues. Like scattered fingerprints, each fragment matters. You must identify the intended reaction type, write the balanced equation, explain the source of the anomaly, and propose the correct experimental procedure. These conclusions will be compiled into a one-page deduction sheet. Miss a link in the chain, and the case collapses. Only teams that complete the picture in full will proceed.

Crack the theory, and the lab opens its final door.

In the second phase, delegates will be granted access to the four residue samples, along with a limited set of analytical tools salvaged from the wreckage. Here, theory meets evidence. Using qualitative analysis, you must determine which two samples were the original reactants identified in Round 1, then distinguish the intended product from the unintended one. Your logic must be airtight. Every claim must leave a trace.

No memorization is required, but familiarity is expected. You should recognize common reaction types such as neutralization, substitution, esterification, and decomposition. You must understand how catalysts accelerate fate, wield qualitative analysis skills ranging from pH interpretation to basic ion tests, and read graphs, simplified IR spectra, and functional group clues like a forensic report. An analysis sheet will be provided to guide your work.

Perk: Immunity

Those who prove indispensable to the investigation will be rewarded. The winning delegation earns a rare compound: **Immunity**. This grants protection from elimination or disqualification in any module round of the owner's choosing and shields its holders from the effects of Sabotage – the perk of savagery awarded to the victors of Isaac's Duel. Use it wisely. In a lab where every move is observed, even invincibility draws attention

Note: The information in this document is subject to changes.