

# Curiosity: The Dot in a Hydrate Formula

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Curiosity Reading | CheAI Research Inc.

**Packet ID:** g09\_u05\_w19

**Connection:** art, materials, and storage

**Reading time:** 4 minutes

The dot in a hydrate formula marks a fixed ratio of water molecules associated with a crystalline compound. It is chemical notation, not a recipe or safety label. Heating can change some hydrates, but this course uses only representations and data—not heating unknown materials. Names help chemists communicate formulas; they do not replace hazard information, conditions, or measurements.

## Think like a chemist

1. What ratio does the 5 in  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  communicate?
2. Why do molecular names use prefixes?
3. What additional source is needed for safe handling?

| Word            | Meaning                                | Packet   |
|-----------------|----------------------------------------|----------|
| hydrate         | compound with associated water ratio   | 12–16    |
| prefix          | word part giving molecular count       | 1–7      |
| acid convention | classroom name tied to aqueous formula | 8–11, 19 |