

## Bell Ringer #36:

Socratic Room Name:  
LEVEL70WARRIOR

### Empirical Formula

<http://drmoad.weebly.com/>

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## Agenda

Bell Ringer  
Kahoot Quiz: Polyatomic Ions  
Empirical Formula Notes  
Video  
Practice Problems  
Worksheet  
Exit Ticket: Quiz Grade

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What is the percent composition by mass of aluminum in aluminum hydroxide?

Is aluminum hydroxide an ionic or covalent compound?

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What is the percent composition by mass of aluminum in aluminum hydroxide?

What is the formula of aluminum hydroxide?

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### Directions for finding Percent Composition

1. Find the total molecular mass
2. Divide the element mass by the total mass and multiply by 100.

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What is the percent composition by mass of aluminum in aluminum hydroxide?

What is the molecular weight of aluminum hydroxide?

What is the mass of aluminum?

\_\_\_\_\_ × 100 =

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## Kahoot Review of Polyatomic Ions for Extra Credit!

**You are competing against yourself.**

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## Empirical Formulas

### Definition:

Empirical Formula is the simplest whole number ratio of atoms of each element in a compound.

-- or more concisely --  
it is the simplest chemical formula of a compound.

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When methyl acetate was analyzed in an elemental analysis test, the compound was found to contain 48.64% carbon (C), 8.16% hydrogen (H), and 43.20% oxygen (O). Determine the empirical formula of this compound.

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## Empirical Formula Video

<https://www.youtube.com/v/ZiXtpuDZIP8?version=3&start=0&end=365&autoplay=1>

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### Whiteboard Problem:

NutraSweet is 57.14% C, 6.16% H, 9.52% N, and 27.18% O. Calculate the empirical formula of NutraSweet.

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### Whiteboard Problem:

Calculate the empirical formula of a compound composed of 38.67% C, 16.22% H, and 45.11% N.

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## Determining Empirical Formulas Worksheet

**Exit Ticket #36:**

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**Treated as a quiz grade.**