Case #1
Jinkies! The Moaning Lisa has been stolen from the Haunted Museum! The crime scene contained traces of a chemical that was found to be 52.11%C, 13.14%H and 34.75%O. What is the empirical formula? What art thief would be so bold?

Case #2
Creepers! A creepy corpse stole all of Ma Ribbins money from her grocery store. The crime scene team found a compound that was 27.37%Na, 1.20%H, 14.30%C, and 57.14%O. What was the empirical formula of this compound, and who committed the theft?

Case #1
Jinkies! The Moaning Lisa has been stolen from the Haunted Museum! The crime scene contained drops of a liquid. When put through a mass spec, the .05g sample was found to have .026055gC, .0174gO, and 6.57×10^{-3}gH. What is the empirical formula? What art thief would be so bold?

Case #2
Creepers! A creepy corpse stole all of Ma Ribbins money from her grocery store. The crime scene team found a white powder. A mass spec revealed the .13g sample as .0356gNa, 1.56×10^{-3}gH, .0186gC, and .074282gO. What was the empirical formula of this compound, and who committed the theft?

Case #3
Zoinks! A cat burglar broke onto the Eastman Estate and stole all of Ms. Eastman's bling! A chemical at this crime scene had a very strong smell. It had a percentage composition of 62.02% C, 10.43% H, and 27.55% O. What was the empirical formula? Who should the police arrest?

Case #4
Pirate Pete swears that the scurvy mate who stole his parrot should walk the plank. Like, creepy, man. At this crime scene, the police found a compound which was 11.21%H and 88.79%O. What is the empirical formula? Who committed the crime?

Case #3
Zoinks! A cat burglar broke onto the Eastman Estate and stole all of Ms. Eastman's bling! A chemical at this crime scene had a very strong smell. A small liquid sample (dropper mass 1.800g, dropper + liquid mass = 1.803g) was run through a mass spec. The make-up of the sample was 1.8606×10^{-3}gC, 3.129×10^{-4}gH, and 8.265×10^{-4}gO. What was the empirical formula? Who should the police arrest?

Case #4
Pirate Pete swears that the scurvy mate who stole his parrot should walk the plank. Like, creepy, man. At this crime scene, the police found a colorless liquid. 10 drops (at .05g each) were tested. The sample had .05605gH and .44395gO. What is the empirical formula? Who committed the crime?

Case #5
Jeepers! Someone snuck into the Movie Madness studio and stole the reels for the new film! The CSI team found a liquid at this crime scene. When analyzed, it was found to contain 5.94%H and 94.06%O. What was the empirical formula? Who should the police question?

Case #6
Someone stole the net from the High Wire act at the Crazy Circus! Without it, the show can't go on! At this crime scene, there were traces of a compound which contained 60.0%C, 13.4%H, and 26.6 %O. What was the empirical formula of the compound? Who committed the heinous act?

Case #5
Jeepers! Someone snuck into the Movie Madness studio and stole the reels for the new film! The CSI team found a liquid at this crime scene. When the .7700g sample was analyzed, it was found to contain .0457gH and .7243gO. What was the empirical formula? Who should the police question?

Case #6
Someone stole the net from the High Wire act at the Crazy Circus! Without it, the show can't go on! At this crime scene, there were traces of a liquid, 9 drops (at .05g a drop) were found to contain .27gC, .1197gO, and .0603gH. What was the empirical formula of the compound? Who committed the heinous act?

Case #7
Old Man Higgins had his favorite cane taken from him when he was out for a walk through Sinister Park. The CSI team found traces of a solid sample at this crime scene. It was found to contain 39.33% Na and 61.67%Cl. What was the empirical formula of the compound? What kind of person would steal an antique cane?

Case #8
The original getaway vehicle that Bugsy Malone drove disappeared from the Antique Auto Show. Traces of a strong-smelling liquid were found at this crime scene. The percentage composition of the liquid was 39.99%C, 6.73%H, and 53.28%O. What was the empirical formula of this liquid? Who dunnit?

Case #7
Old Man Higgins had his favorite cane taken from him when he was out for a walk through Sinister Park. The CSI team found traces of a white powder at this crime scene. To be 61.67%Cl. A flame test yielded a yellow flame, indicating the remaining portion was sodium. What was the empirical formula of the compound? What kind of person would steal an antique cane?

Case #8
The original getaway vehicle that Bugsy Malone drove disappeared from the Antique Auto Show. Traces of a strong-smelling liquid were found at this crime scene. The percentage composition of the liquid was 39.99%C and 53.28%O. The remaining portion was H. What was the empirical formula of this liquid? Who dunnit?