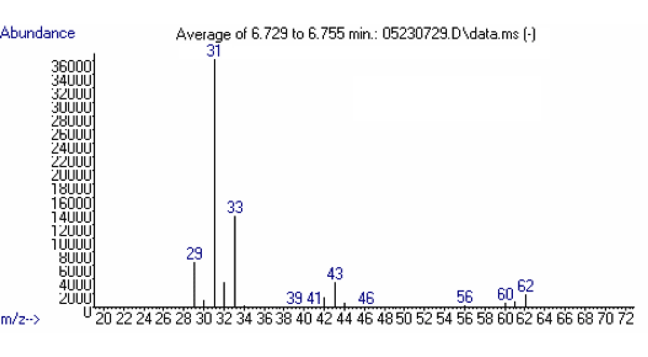
**Mass Spectrum of Compound found in Victim’s Coffee**

Mass spectrometry (MS) is an analytical technique that produces spectra (singular *spectrum*) of the masses of the atoms or molecules comprising a sample of material.

In a mass spectrum, the peak or line at the **highest mass** (on the x-axis) represents the molar mass of the compound.



Compare the molar mass found from the spectrum above to the molar masses for the compounds below. One of these compounds is the compound found in the victim’s coffee.

|  |  |  |  |
| --- | --- | --- | --- |
| **Chemical Formula** | **Chemical Name** | **Common Name** | **Molar Mass (g/mol)** |
| 1. BaCO3 | Barium Carbonate | Rat Poison | 197.34 |
| 2. C2H6O2 | Ethylene Glycol | Antifreeze | 62.07 |
| 3. MgF2 | Magnesium Fluoride | Anti-reflective Coating | 62.3018 |
| 4. KCN | Potassium Cyanide | Cyanide | 65.12 |
| 5. C18H21NO3 | Hydrocodone | Vicodin | 299.4 |
| 6. HNO | Azanone | Nitroxyl | 31.01 |