

37. a. **Molar Mass:** 239.265 g
Mass Percent: Pb 86.598 %; S 13.401 %
- b. **Molar Mass:** 30.06904 g
Mass Percent: C 79.887 %; H 20.112 %
- c. **Molar Mass:** 60.05196 g
Mass Percent: C 40.001 %; H 6.7137 %; O 53.285 %
- d. **Molar Mass:** 80.04336 g
Mass Percent: N 34.997 %; H 5.0369 %; O 59.965 %
38. a. **Molar Mass:** 84.3139 g
Mass Percent: Mg 28.826 %; C 14.245 %; O 56.927 %
- b. **Molar Mass:** 94.11124 g
Mass Percent: C 76.573 %; H 6.4260 %; O 17.000 %
- c. **Molar Mass:** 121.06 g
Mass Percent: C 19.83 %; H 2.50 %; O 66.08 %; 11.57 % N
- d. **Molar Mass:** 183.20 g
Mass Percent: C 26.22 %; H 5.51 %; O 26.20 %; 7.65% N; 16.91 % P; 17.51 % S
39. a. **Molar Mass:** 53.06262 g
- b. **Mass Percent:** C 67.904 %; H 5.6985 %; N 26.396 %
41. a. **Molar mass:** 406.902 g
- b. **Mass Percent:** 38.34 % C; 1.49 % H; 52.28 % Cl; 7.86 % O
42. a. **Molar Mass:** 354.48626 g
- b. **Mass Percent:** C 47.434 %; H 2.5590 %; Cl 50.006 %
43. $C_4H_4O_4$
44. $C_4H_8N_2O_2$
45. empirical - CH; molecular - C_2H_2
46. B_5H_7
47. N_2O_3
48. empirical - C_3H_4 ; molecular - C_9H_{12}
49. empirical - CH_2O ; molecular - $C_2H_4O_2$
50. empirical - C_5H_7N ; molecular - $C_{10}H_{14}N_2$
51. empirical - C_2H_6As ; molecular - $C_4H_{12}As_2$
52. $C_5H_{14}N_2$
53. $C_8H_8O_3$
54. empirical and molecular - CF_2O_2
55. $C_{10}H_8$
56. $C_9H_7MnO_3$
57. three
58. twelve
59. seven
60. 3.78 g water; 6.72 g anhydrous salt
61. a. sodium bicarbonate or sodium hydrogen carbonate
- b. 10.8 moles
- c. 32.4 moles oxygen; 519 g oxygen
62. a. 169.111 g
- b. 0.0118 mol
- c. 0.0473 mol oxygen; $2.85E22$ atoms
63. a. 78.07 g
- b. 0.0200 mol
- c. 24.02 g
64. 537.50 g
65. six
66. XeF_2
67. empirical - SCl ; molecular - S_2Cl_2
68. empirical - ICl_3 ; molecular - I_2Cl_6