Empirical formula for cisplatin

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Solution:

Step 1. Determine atomic mass weighted values.

Pt: 65.02/195.08 = 0.3332

N: 9.34/14 = 0.6671

H: 2.02/1 = 2.02

O: 23.63/35.45 = 0.6665

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Step 2. Determine the empirical formula by taking ratios to the smallest value.

N:Pt = 0.6671/0.3332 = 2.01

H:Pr = 2.02/0.3332 = 5.98

H:N = 0.6665/0.3332 = 2.00

The formula is $PtCl_2N_2H_6$