

## Answer on question #58455 - Chemistry - Inorganic Chemistry

### Question:

What is the molar mass and atomic mass of M if Cl contains 37.38mg of the compound  $MCl_4$  of 50.00mg.

### Solution:

$$\frac{m(M)}{M(M)} : \frac{m(Cl)}{M(Cl)} = 1:4$$

The mass of M in compound  $MCl_4$ :

$$m(M) = 50 - 37.38 = 12.62 \text{ mg}$$

$$12.62/M(M):37.38/35.45 = 1:4$$

$$M(M) = 47.87 \text{ g/mol}$$

$$Ar(M) = 47.87 \text{ a.m.u}$$

### Answer:

$$M(M) = 47.87 \text{ g/mol}$$

$$Ar(M) = 47.87 \text{ a.m.u}$$

The M is Titanium