

Question #47592, Chemistry, Inorganic Chemistry

Mass fraction of ^{204}Pb is 1.4%. So, mass of ^{204}Pb in the sample is:

$$m_{^{204}\text{Pb}} = \frac{1.4 * 857}{100} = 11.998 \text{ g}$$

$$n_{^{204}\text{Pb}} = \frac{11.998}{204} = 0.059 \text{ mol}$$

$$N_{^{204}\text{Pb}} = 0.059 * 6.02 * 10^{23} = 3.55 * 10^{22}$$