

## Answer on Question #63779 - Chemistry – General Chemistry

The first ionization energy of Hg (mercury) is 1006 kJ/mol. How much energy in joule will be required to ionize 50 g of Hg atoms?

### **Solution.**



$$1006 \text{ kJ} - 1 \text{ mol Hg}$$

$$1006 \text{ kJ} - 201 \text{ g Hg}$$

$$x \text{ kJ} - 50 \text{ g Hg}$$

$$x = 50 \times 1006 / 201 = 250 \text{ kJ} = 250\,000 \text{ J}$$

**Answer:** E = 250 000 J

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