

34.5: Analysis

1. Calculate the energy for each wavelength in the atomic spectrum of hydrogen. Match the wavelengths and energies to the colors you observed when you viewed hydrogen. You will need to convert each wavelength to meters before you calculate the energy in Joules.

Table 34.5.1

Wavelength (nm)	Wavelength (m)	Energy (J)	Color
397			
410			
434			
586			
656			

2. Explain why each element has a different dominant color.
3. Based on your data, is an atomic spectrum unique to the element? Explain.

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