

Source and Color of Line	a (cm)	b (cm)	d (cm)	Wavelength (cm)	Wavelength (nm)	Frequency (s ⁻¹)	Energy (J/photon)	Energy (kJ/mole)	Rydberg Eq calculation of λ (nm)	
1. H (red) n = 3 → n = 2										
2. H (blue) n = 4 → n = 2										
3. H (violet) n = 5 → n = 2										
4. He (yellow)									X	
5. Hg (green)									X	
6. H n = 2 → n = 1	Show calculation to determine d here:									
7. H n = ∞ → n = 1										
8. H n = 4 → n = 3										
9. H n = ∞ → n = 3										
10. H n = ∞ → n = 2										
										IR, Vis, UV
										IR, Vis, UV
										IR, Vis, UV
										IR, Vis, UV
										IR, Vis, UV