SAMPLE DATA

**Before electricity is applied**, all gases will be colorless. They need electricity for excitation.

**After electricity is applied**, colors appear as shown below.

| **Type of Gas** | **Colors Observed without Spectroscope** | **Colors Observed with Spectroscope** |
| --- | --- | --- |
| **Hydrogen** |  |  |
| **Nitrogen** |  |  |
| **Helium** |  |  |
| **Neon** |  |  |
| **Carbon Dioxide** |  | Image Sources: *NASA Space Telescope Science Institute. (2019, June 6). Spectra showing different elements [Image]. Hubblesite.* [*https://hubblesite.org/image/4511/category/115-spectra*](https://hubblesite.org/image/4511/category/115-spectra)  *Noschese 180. (2014). Emission spectra. A picture-a-day for the school year [Image].* [*https://noschese180.files.wordpress.com/2014/12/ emission\_spec.png*](https://noschese180.files.wordpress.com/2014/12/emission_spec.png)  *University of Texas. (n.d.). Line spectra in hydrogen [Image]. Chemistry 301* [*https://ch301.cm.utexas.edu/atomic/index.php#H-atom/line-spectra.html*](https://ch301.cm.utexas.edu/atomic/index.php#H-atom/line-spectra.html)  *Vernier. (n.d.). Spectrum tubes [Image]. Vernier.* [*https://www.vernier.com/product/spectrum-tubes/*](https://www.vernier.com/product/spectrum-tubes/) |
| **Air** |  |
| **Argon** |  |