A dry lab is a laboratory where computational or applied mathematical analyses are done on a computer-generated model to simulate a phenomenon in the physical realm.

The experiments described in these materials are potentially hazardous and require a high level of safety training, special facilities and equipment, and supervision by appropriate individuals. You bear the sole responsibility, liability, and risk for the implementation of such safety procedures and measures. LibreTexts shall have no responsibility, liability, or risk for the content or implementation of any of the material presented.

• **Dry Lab Experiments**

  ![Dry Lab Experiment](image)

  A dry lab is a laboratory where computational or applied mathematical analyses are done on a computer-generated model to simulate a phenomenon in the physical realm. Examples of such phenomena include a molecule changing quantum states, the event horizon of a black hole or anything that otherwise might be impossible or too dangerous to observe under normal laboratory conditions. This term may also refer to a lab that uses primarily electronic equipment, for example, a robotics lab.

  ◦ 1: *ab initio* Calculations - Atomic Energetics (Dry Lab)
  ◦ 2: *ab initio* Calculations - Diatomic Molecular Orbitals (Dry Lab)
  ◦ 3: *ab initio* Calculations - Dihydrogen Potential Curve (Dry Lab)
  ◦ 4: *ab initio* Calculations - Electron-Electron Repulsion (Dry Lab)
  ◦ Exercise I: Structure and Electronic Energy of a Small Molecule
  ◦ Simulation: Probabilistic Interpretation of Atomic Orbitals (Dry Lab)

• **Wet Lab Experiments**

  ![Wet Lab Experiment](image)

  Wet laboratories are laboratories where chemicals, drugs, or other material or biological matter are handled in liquid solutions or volatile phases, requiring direct ventilation, and specialized piped utilities (typically water and various gases).
- General Chemistry Labs
- Organic Chemistry Labs
- Analytical Chemistry Labs
- MIT Labs
- Chemistry in Action Laboratory Manual