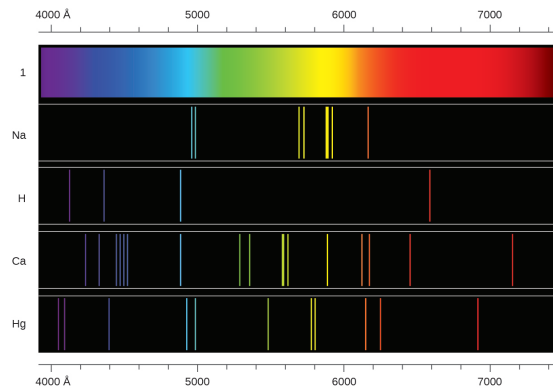




# Atomic Spectra

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# **1 Introduction**

## **1.1 Goal**

The main goal of this experiment is to observe the spectral lines of the sodium atom in the visible region to make comments about the physical mechanism of fine structure and verify the theory with experimental data.

## **1.2 Theory**

## **1.3 Diffraction Mechanism**

## **1.4 Fine Structure**



## **2 Experimental Details**

### **2.1 Equipment**

#### **2.1.1 Equipment 1**

#### **2.1.2 Equipment 2**

#### **2.1.3 Equipment 3**

### **2.2 Procedure**

#### **2.2.1 Part 1**

#### **2.2.2 Part 2**



## **3 Measurement And Data Analysis**

### **3.1 Presentation Of Data**

### **3.2 Calculations**



## 4 Results And Discussion

### 4.1 Discussion Of Results

### 4.2 Discussion Of Errors



## References

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- [2] Michael A. Nielsen and Isaac L. Chuang. *Quantum Computation and Quantum Information*. Cambridge University Press, 2010.