

## Circular Dichroism Spectrophotometer

### WORKING PRINCIPLE

Circular Dichroism (CD) is the difference in the absorbance of left-handed circularly Polarized light (L-CPL) and right-handed circularly polarized light (R-CPL) and occurs when a molecule contains one or more Chiral Chromophores (light-absorbing groups).

Circular Dichroism (CD) spectroscopy is a spectroscopic technique where the CD of molecules is measured over a range of wavelengths. CD spectroscopy is used extensively to study Chiral molecules of all types and sizes, but it is in the study of large biological molecules where it finds its most important applications.

### APPLICATION

Simultaneous measurement of circular Dichroism, absorption and fluorescence,  
Characterization Stability studies,

A primary use is in analyzing the secondary structure or conformation of macromolecules, particularly proteins, and because secondary structure is sensitive to its environment, e.g. temperature or pH, circular Dichroism can be used to observe how secondary structure changes with environmental conditions or on interaction with other molecules. Structural, kinetic and thermodynamic information about macromolecules can be derived from circular Dichroism. spectroscopy.

### **Sample Submission**

- The users should download and fill up the form and submit it with the sample
- Each sample has to be listed separately
- External samples will be analyzed anytime during the week at a fixed rate.

### **Payments**

- External users, please call and confirm the status of the instrument and then
- Payment may be made via bank transfer to the given bank account no and the UTI no. may be shared for our reference.
- Students can also swipe the card for the appropriate amount using swipe machine available in the department office with the sample.

Bank Account details	Account number 2722101016162
IFSC code	CNRB0002722
Bank name	Canara bank Branch name IIT Madras Branch



External users only

**DEPARTMENT OF CHEMISTRY, IIT MADRAS**  
**CIRCULAR DICHROISM REQUISITION FORM**

**User Information**

Name:

Billing name:

Address:

Email ID:

Academic [ ]

Industry [ ]

No of Samples:

Sample Code:

Spectral range:

UPI ID Transaction No:

Amount:

Student's signature

Research Guide's signature



**Internal users only**

**DEPARTMENT OF CHEMISTRY, IIT MADRAS**  
**CIRCULAR DICHROISM REQUISITION FORM**

**User Information**

Name:

Department:

Email ID:

No of Samples:

Sample Code:

Spectral range:

UPI Transaction ID:

Amount:

Student's signature

Research Guide's signature & Seal