**Circular Dichroism**

**(CD)**

**Analysis Request**

1. **Applicant Information**

|  |  |
| --- | --- |
| **Name**  |  |
| **Email** |  | **Phone** |  |
| **Supervisor** |  | **Supervisor email** |  |
| **Group/Lab** |  | **Phone extension** |  |

1. **Assay Information**

If you have more then one sample but assay conditions are the same you just need to submit one form.

* **Spectra**

|  |  |
| --- | --- |
| **Sample name** |  |
| **Sample type** (protein, peptide, organic compound, nucleic acid…) |  |
| **Concentration** |  |
| **Temperature** |  |
| **Buffer** |  |
| **Cuvette pathlength**  |  |
| **Wavelengths** | to |
| **Bandwidth**(default 1 nm) |  |
| **Step**(default 1 nm) |  |
| **Time per point** |  |
| **Number of repeats** |  |
| **Sample return** (when applicable and to be collected in the laboratory; yes/no) |  |

* **Temperature Ramp**

|  |  |
| --- | --- |
| **Sample name** |  |
| **Sample type** (protein, peptide, organic compound, nucleic acid…) |  |
| **Concentration** |  |
| **Buffer** |  |
| **Cuvette pathlength**  |  |
| **Wavelengths** | to |
| **Bandwidth**(default 1 nm) |  |
| **Step**(default 1 nm) |  |
| **Time per point**(default is adjusted to each scan take 1 min) |  |
| **Continuous Ramp** | **Stepped Ramp** |
| **Start temperature** |  | **Start temperature** |  |
| **End temperature** |  | **End temperature** |  |
| **Step** |  | **Step** |  |
| **Rate**  |  | **Incubation time**  |  |
| **At the end of the ramp go to**(start temperature/end temperature/ defined temperature) |  |
| **Take a final measure** (Yes/No) |  |
| **Return ramp** (Yes/No) |  |

|  |
| --- |
| **Notes:**(please fill in with information you consider relevant, e.g. abbreviations used on tube identification, sample details and requirements, etc.)  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample requirements:** * Buffers for CD spectroscopy must not contain any materials that are optically active and should be as transparent as possible. The total absorbance of the sample, including the buffer and cell, should be below one for high quality data.
* Buffer components (especially those that contain carboxylates) that have a high absorbance below 200 nm must be avoided (e.g. Tris, dithiothreitol, histidine, chloride, etc.).
* Samples for CD analysis should be free of particulate matter. They can be filtered through filters (e.g. 0.1–0.2 micron).
* An exact protein concentration determination is crucial for CD analysis.
* Far-UV CD: typical cell pathlengths are in the range 0.01 to 0.05 cm and protein concentrations are in the range 0.2 to 1 mg/ml (generally 100 to 500 µg of sample but spectra can be obtained with quantities as low as 10 µg). The optimal protein concentration is a function of the pathlength of the cuvette.
* Near UV CD: Protein concentration of 0.5 to 2 mg/ml and a pathlength of 0.5 to 2 cm. The amounts of protein required are thus of the order of several mg.
* Nucleic Acids: CD can work with DNA amounts as low as 25 µg. The concentration of DNA can also be very low (20 µg/ml).
* Available Cuvettes at BioLab. You just need 2/3 off the total volume to perform the experiment.

|  |  |  |  |
| --- | --- | --- | --- |
| Cuvette | Type | Pathlength (mm) | Total Volume (µl) |
| Hellma QS 110-10-40 | Retangular | 10 | 3500  |
| Hellma QS 110-2-40 | Retangular | 2 | 700  |
| Hellma QS 110-1-40 | Retangular | 1 | 350  |
| Hellma QS 121-0.2-40 | Circular | 0.2 | 170  |
| Hellma QS 121-0.1-40 | Circular | 0.1 | 160  |

**Results will be sent exclusively by email in the .csv format.**If you need help with result analysis please contact the technician. |

**Contacts:**

Elisabete Ferreira

ep.ferreira@fct.unl.pt

+351 937556792

**BioLab**

Laboratório 213

Piso 2, Faculdade de Ciências e Tecnologia

Universidade Nova de Lisboa

Campus de Caparica

2829-516 Caparica

Portugal

+351 212948300 #10958

Submission date: Analysis date: