

Electrolab Innovation Center

(EIC) Brochure





Services:

- **Electrolab Innovation Center (EIC)**
- **General Analytical Services**
- **Assistance**



Electrolab Innovation Center (EIC):

- **In-Vitro Release test (IVRT)/Dissolution testing**
- **Permeation Testing (IVIVC Tool)**
- **In Vitro Permeation Testing (IVPT) for topical Dosage forms.**
- **Compound (API) Screening**
- **API Characteristic and Dissolution Testing.**
- **Analytical Method Development**
- **In-Vivo and In-Vitro Correlation (IVIVC) – Simulation Plus**

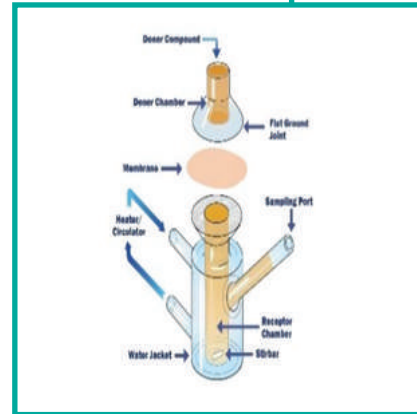
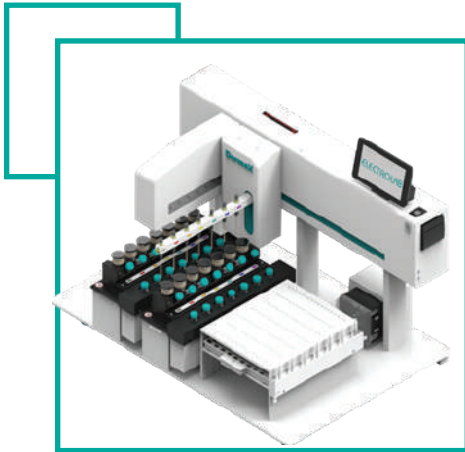
• In-Vitro Release test (IVRT)/Dissolution testing

- **Dissolution Method development using USP Type 1 to 7:** Optimize dissolution test conditions such as dissolution Media, Rotation speeds and sampling intervals for each apparatus type.
- **Dissolution Profile Comparison:** Perform statistical analysis to quantify the similarity or dissimilarity between dissolution profiles, using appropriate methods such as model-independent approaches (e.g., Similarity factor F2) and / or model dependent approaches (e.g., difference factor F1)
- **Customized Dissolution Testing:** Designing and conducting dissolution studies tailored to specific drug formulations or research needs. This may include modified testing conditions or specialized.
- **Data Analysis and Reporting:** Analysing dissolution data and preparing comprehensive reports that summarize the test results, including dissolution profiles, statistical analysis and interpretation of the findings.

• Permeation Testing (IVIVC Tool)

- Electrolab Dissoflux allows analyst to predict dissolution along with permeation capability of the formulation.
- Dissoflux testing is useful to rank order the formulation when Bio study were carried out. It allows user to predict IVIVC and increased success rate for the Bio study
- Dissoflux is a dissolution tester having dissolution bath equipped with permeation chambers. For barrier Permeapad or Specialized Lipid membrane that mimic GI Track) were used. Dissoflux will gives both the results simultaneously i.e., dissolution and permeation data.
- Dissoflux is very useful tool to predict IVIVC for Class 2 and Class 4 molecules.

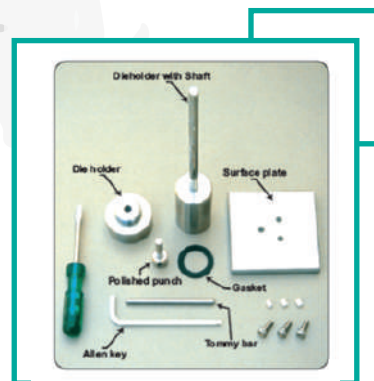
• In Vitro Permeation Testing (IVPT) for topical Dosage forms.



- IVPT is used to evaluate the performance of different formulations intended for topical or transdermal delivery. It helps to determine the most suitable formulation components, such as penetration enhancers or excipients, to optimize drug delivery through the skin.
- IVPT is a critical tool to determine sameness of two formulations (RLD Vs generic)
- IVPT testing is done in topical product development. Franz diffusion cells were used to test the permeation of the product across the skin layer.

• Compound (API) Screening

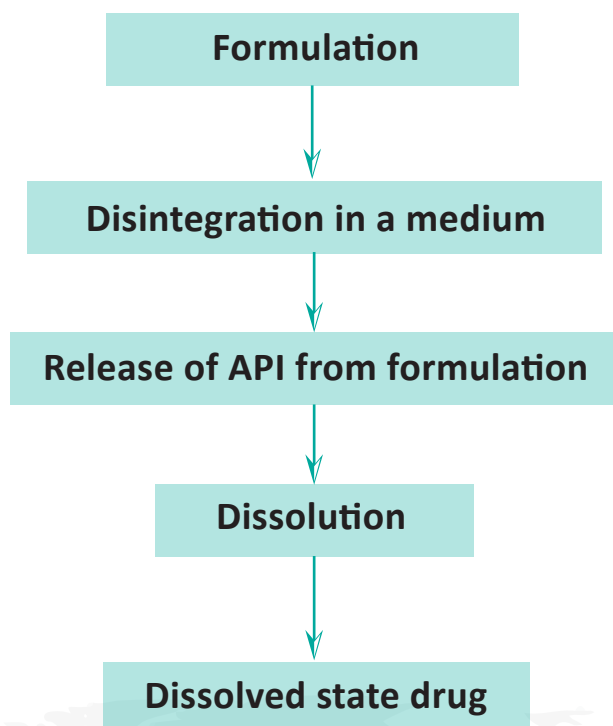
- Intrinsic Dissolution: Intrinsic dissolution testing is a technique used to determine the dissolution rate of pure drug substances or active pharmaceutical ingredients (APIs) without the presence of any excipients or formulation components



- USP Type 4 (Flow through Cell): Powder cell were utilized to determine API Characteristic.



• API Characteristics and Dissolution Testing:



• Analytical Method Development

- Method development is carried out on all types of dissolution tester depending on formulation.
- Assay and content Uniformity Method development using Extractr.
- Immersion cell, Franz diffusion cell were utilized for semi solid products.
- Electrolab Innovation center provide solution at below mentioned stages.
 - Method acceptability: to check Feasibility of the dissolution test method
 - Method Evaluation: To check method evaluation for further process to complete method development activities.
 - Complete Method development: Support for complete dissolution method development with QbD.

• **In vivo and In vitro correlation (IVIVC)**

- In vivo-in vitro correlation (IVIVC) is a scientific approach used in pharmaceutical research and development to establish a relationship between in vivo drug behaviour (observed in humans or animals) and in vitro drug properties (measured in laboratory settings). IVIVC aims to predict the in vivo performance of a drug product based on its in vitro characteristics, reducing the need for extensive and costly in vivo studies.
- Electrolab collaborate with Simulation Plus for all related software which predicts IVIVC correlation.

General Analytical Services :

- **Method Development/Validation/Transfer**
- **Stability Analysis**
- **Routine Analysis**
- **Dissolution**

• **Method Development/Validation/Transfer**

- Electrolab provides all method development activities in accordance with ICH guidelines
- All developed methods were validated in GMP environments.
- Developed methods then transferred to respective site.
- All protocols were drafted and approved by Electrolab Management. Protocol included Method development report, Method validation protocol, Method validation report and Method Transfer reports.

• Stability Analysis

- Electrolab will perform all conditions stability samples analysis (Assay, Related substances and Dissolution)

• Routine Analysis

- Electrolab will help customers to complete their routine/QC Analysis.
- QC Analysis included Dissolution, IVRT, General Assay and related substances routine analysis.

• Dissolution

- Electrolab will help clients to developed method by using various types of Dissolution (USP type 1 to 7)
- Semi-solid by Franz diffusion cell

Assistance :

• Advisory :

- Electrolab offers services for review of all analytical data generated during Product development.
- Training/Learning:
 - Method Development (General Training)
 - Dissolution Method development (Apart from Conventional methods)
 - Dissolution training (USP type 1 to 7)
 - Simulation Plus Software (IVIVC Corelation)
 - GMP environment
 - Semisolid diffusion testing
 - Permeability testing

We are your **ONE-STOP SOLUTION** for all your trial needs.

Our Products

- Complete Range of Dissolution Testers • Dissolution Media Degasser • Disintegration Testers • Friability Testers
- Tablet Hardness Testers • Electromagnetic Sieve Shakers • Tap Density Tester • Bulk Density Tester
- Powder Flow Tester • Leak Tester • Peristaltic Pumps



The information contained in this document is believed to be correct but ELECTROLAB accepts no liability for any errors and reserves the right to alter specifications without notice
March, 2017 / 016A001

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