

# Discovery Research

## Analytical Chemistry Capabilities



### Discovery Research Suven Life Sciences Ltd

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## State of the Art Laboratories

- Equipped with automated instruments which are fully sophisticated, qualified and calibrated.
- We provide a complete array of analytical services, to support the drug development, process research and product release procedures.
- Our extensive experience ensures rapid and reliable data delivery.



## NMR-Bruker's 400 MHz

- Most useful tool for identifying the skeletal structure of organic compounds. Essential for interpreting structure of the molecules by synthetic chemists and biologists for protein structure determination.
- $^1\text{H}$ -NMR, D<sub>2</sub>O-Exchange,  $^{13}\text{C}$ -NMR, DEPT, 2D experiments like COSY, NOESY, ROESY, TOCSY and different nuclei like  $^{31}\text{P}$ ,  $^{15}\text{N}$ ,  $^{19}\text{F}$  etc., using Multipurpose Broad Band probe with Automated tuning and matching (ATM).





# Mass Spectrometry (LC-MS/MS)

- Molecular ion determination and fragmentation.
- Impurities identification and LC-MS/MS profiling of unknown impurities.
- Quantification of ultra low concentrations of impurities in drug substances.
- Estimation of genotoxic impurities in drug intermediates and drug substances.





# Liquid Chromatography (HPLC)

- Determination of the chromatographic purity of pharmaceutical substances; monitoring the chemical reaction & impurity profiling of a pharmaceutical product.
- HPLC Method Development using UV, PDA, Fluorescence and Refractive Index Detection Systems.
- Related Substances and Assay stability indicating method validation as per ICH guidelines / Customer specific protocol requirements.
- Chiral method development and validation (Both reverse phase and normal phase).

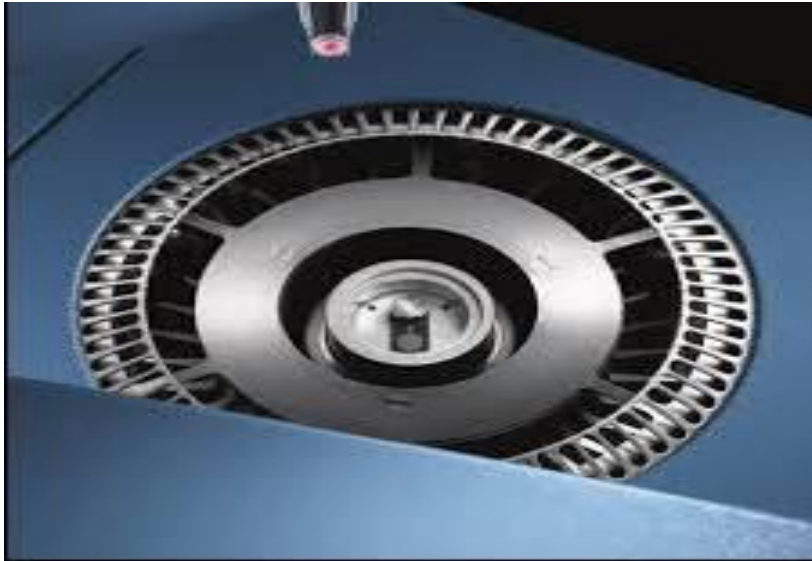




# Thermal Analysis (DSC Q100 - Waters TA)

## DSC (Differential Scanning Calorimetry):

- Most useful instrument for establishing polymorphism and pseudo polymorphism of different pharmaceutical products.
- Useful in detecting melting point of a given product.





# Thermal Analysis (TGA Q500 - Waters TA)

## TGA (Thermo Gravimetric Analysis):

- Most useful in determining the residual solvents, moisture loss (quantitative), crystalline and surface moisture







# Other Analytical Techniques

- Titrimetric Assays
- UV-Visible Spectrophotometer
- FTIR
- Karl-Fischer and Potentiometric Titrator
- Melting Point determination
- Additionally if customer is looking for any specific test, they can enquire with us.



# Quality Assurance



- Independent Quality Assurance Team which ensures good research practices are followed through regular audits
- SOPs for Operation, Calibration, Maintenance and Quality Systems
- Document and Data Control, Conducting Internal Audits, Study Specific Audits
- Dedicated Archive facility for the retention of the records
- Well Managed Reports/Data and Samples Storage & Retrieval

# Services



- Method development and validation for different pharmaceutical products and new chemical entities using HPLC with variable detectors.
- Determining the structure for a given compound by recording NMR spectra like  $^1\text{H-NMR}$ ,  $^{13}\text{C-NMR}$  and other 2D-NMR.
- Molecular ion determination and fragmentation using LC-MS/MS.
- Thermal Analysis using DSC & TGA.
- Moisture determination using KF Titrator.
- Determination of Organic Volatile Impurities and Residual Solvents by using GC and GC-MS.
- Additionally if customer is looking for any specific test, they can enquire with us.
- We are committed to provide quality services in a timely and cost-effective manner.
- We shall ensure confidentiality, while being flexible and transparent with our clients.

# Contacts



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