

Innovating the Right Chemistry

At Hikal, we solve complex chemistry problems for global innovators and custom-generic companies through our state-of-the-art Research and Technology Centre. We partner with Pharmaceuticals, Animal Health, Biotech, Crop Protection, and Specialty Chemicals industries to develop sustainable, safe, and cost-effective processes for NCEs, generic molecules, and life-cycle management.

Leveraging advanced research, technology, and expertise, we offer integrated solutions with a focus on quality, service delivery, and intellectual property. Our commitment to green chemistry and engineering ensures both business and environmental sustainability.



15
SYNTHETIC LABORATORIES

4
INSTRUMENTATION LABS

1
HIGH PRESSURE LAB

6
PD LAB

1
KILO LAB (SCALE UP AND PILOT)

1
EFFLUENT TREATABILITY LAB

1
INNOVATION LAB

1
SIMULATION LAB

1
PROCESS SAFETY LAB

1
SOLID STATE CHEMISTRY LAB

>250
POST GRADUATES

26
PHD (including 10 post-Doc)

Differentiated Offerings



Route Scouting



Process Development



Analytical Method Development



Technology Development



Small Scale Synthesis



Scale-up Support



Process Engineering

Differentiated Offerings

Kilo Lab

- » Facility for kilo and pilot batches
- » Process feasibility and scalability demonstration
- » Reactor geometrically matched to commercial scale
- » Validate design and process at a higher scale
- » Reactor capacity: 20 to 160 L
- » Facility for cryogenic reactions (up to -80°C)
- » Fractionation at 2-3 Torr up to 200°C
- » Scrubber for acidic and general vapours

Flow Chemistry

- » State-of-the-art facility for flow chemistry
- » VaporTech equipment
- » Continuous Stirred Tank Reactor (CSTR)
 - Capacity: 0.5 to 2 Litres
 - MOC: Glass
- » Reduced effluent generation
- » Estimates key unit operation variables for desired output
- » Capable of bi-phasic, liquid-liquid, gas-liquid, and solid-liquid reactions

Solid State Lab

- » Enhances processes related to product's physical attributes for commercial use
- » Polymorph screening and optimisation
- » Particle size engineering
- » Crystallisation process development
- » Solid state characterisation
- » Equipment: pXRD, Malvern Mastersizer, DSC, TGA, Hot Stage Microscope

Bio-catalysts

- » Expertise in handling enzymes from lab development to manufacturing
- » Supported enzymes for recovery and recycling
- » Enzymatic processes demonstrated for commercial APIs
- » Examples of enzymes: Nitrilase, Lipase, and Transaminase