

API Unit III - Contact Research & Manufacturing Services

Research • Develop • Manufacture

- R&D Building : 52,000 sq. ft.
- Pilot Plant Capacity : 70 KL with Clean Room
- Manufacturing Blocks : 5 Blocks of 240 KL total
- Major R&D Equipment's : Fume Hoods, Hydrogenators & Fermenters
- Plants Equipment : SSR, GLR's, Distillation Columns & Hydrogenators
- Technical Strength : 80

SHAMROCK CRAMS • Research • Develop • Manufacture

- Technical evaluation & identifying ROS.
- Patent / IP evaluation (Non infringing ROS).
- Setting targeted yields for efficiency.
- Setting quality standards.
- Economic & commercial viability.
- Repeated batches & validation of process R&D stage.
- Process validation at pilot stage / trials.
- Commercialization of pilot trials .
- Setting batch size.
- Scale up to commercial batches at plant level.
- Analytical method validation.
- Impurity profiling, characterization, Identification.
- Stability studies Realtime & Accelerated.
- Regulatory documentation & validation.



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Reaction Capabilities:

- Multi-step Synthesis
- High-pressure Reactions
- Catalytic Reactions
- Chiral Synthesis
- Hydrogenation
- Ozonolysis
- Oxidation and Reduction



Our commitment to confidentiality includes:

- **Strict Protocols:** We implement stringent protocols to safeguard your data, from physical security measures to encrypted digital systems.
- **Confidentiality Agreements:** Prior to initiating any collaboration, we establish comprehensive confidentiality agreements to protect your intellectual property rights.
- **Restricted Access:** Access to sensitive information is strictly limited to authorized personnel only, ensuring that your data remains confidential at all times.
- **Employee Training:** Our team undergoes regular training on data security best practices and compliance requirements to maintain the highest standards of confidentiality.
- **Compliance with Regulations:** We adhere to all relevant regulations and industry standards to ensure that your confidential information is handled in accordance with legal requirements.

R&D Timeline Flowchart - Concept to Commercialization:

→ Literature Research
→ Feasibility Study
→ Action Development

→ Research at Lab
→ Prototype Development
→ Testing and Optimization

→ Pilot Production
→ Scale-Up Testing
→ Production