

# Aarti Research & Technology Center

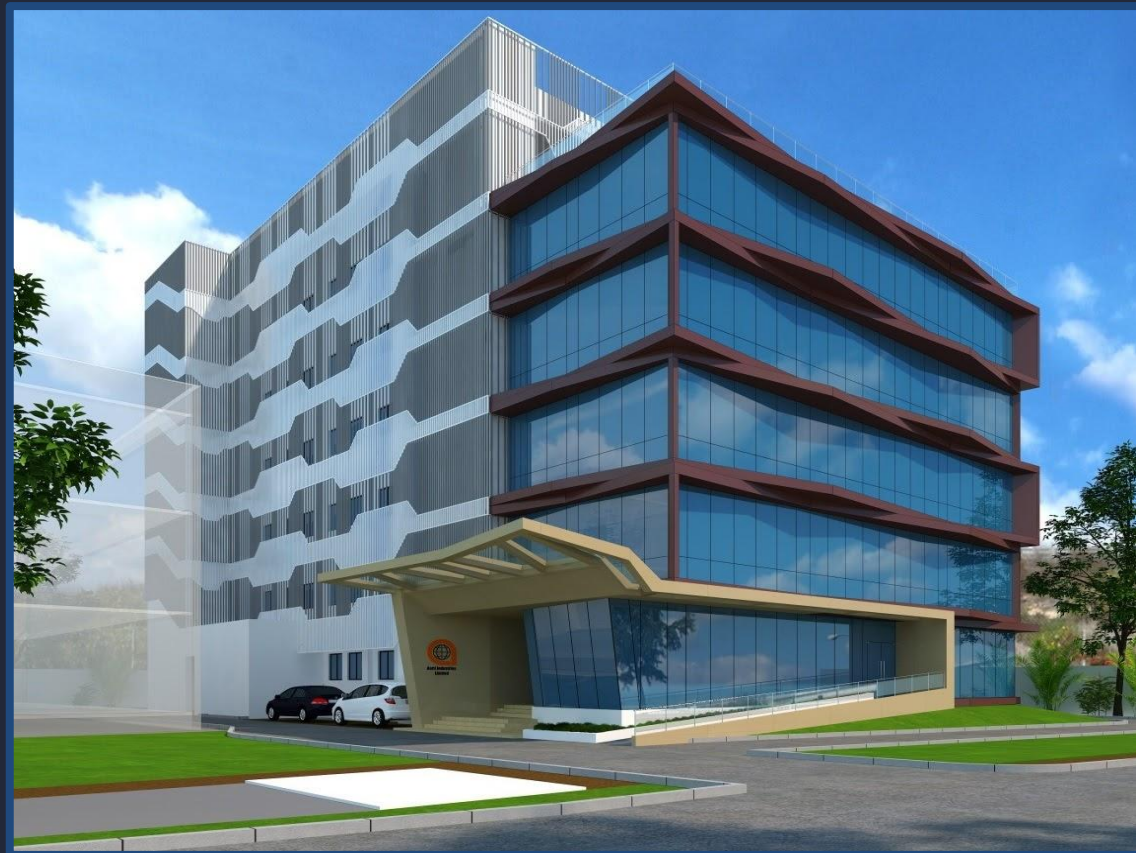
Laboratory Testing Services

CL-4: PUBLIC





AIL commissioned a new state-of-the-art innovation center in March 2020, expanding 50,000 square feet and meeting international standards.



ARTC is fully digitised Lab with state of the art infrastructure built in with latest technology for Analytical Process Safety testing.

ARTC is **ISO:27001:2013** certified and **NABL** accredited & **FDA** recommended and Aarti Industries Limited (AIL) is a Responsible Care Certified company that takes a holistic approach to sustainability.



# Analytical Services Offered

We are committed to provide high-quality deliverables!

- Impurity Profile Determination by HPLC, UPLC and GC
- Impurity Characterization by FT-IR, LC-MS and GC-MS
- Impurity Isolation by Flash Chromatography and Preparative Chromatography
- Estimation of Anions and Cations by Ion Chromatography
- Estimation of Elemental Impurities by ICP-MS
- Particle Size Distribution, Particle Bulk Density and Tap Density Analysis
- Gel Permeation Chromatography (GPC) to measure average molecular weight up to 5 lacs Dalton of Polymers, High Molecular weight molecules and Peptides

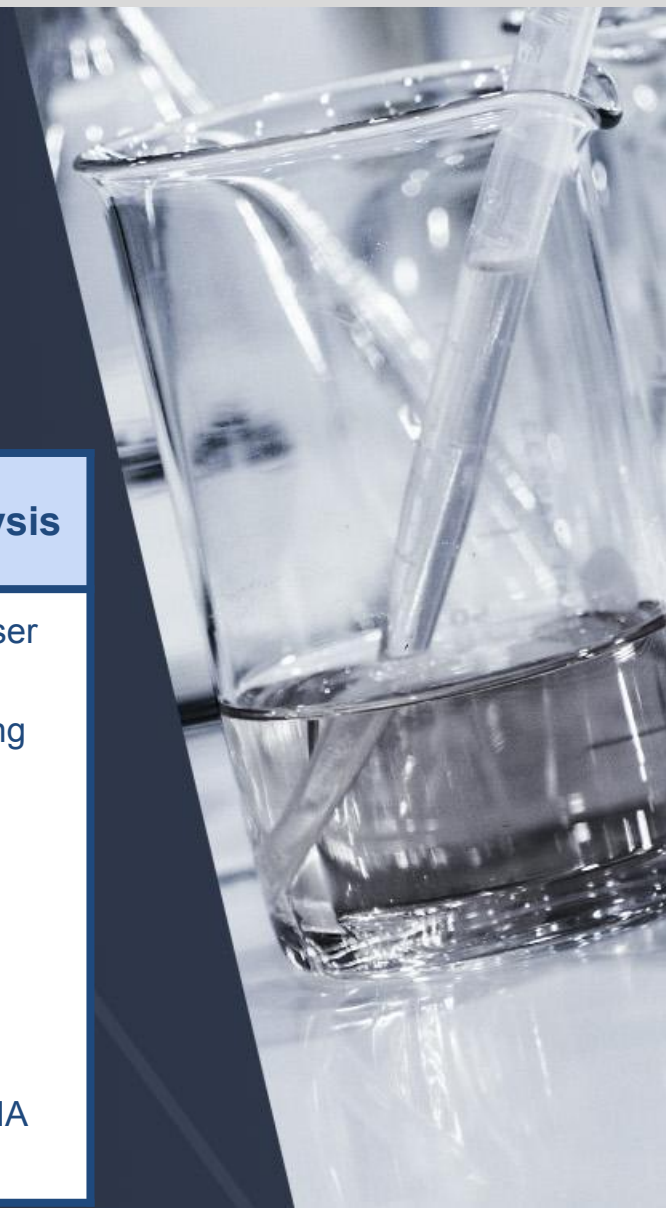
# Our Analytical Capabilities

We are committed to provide high-quality deliverables!

Our dedicated team has 40+ Scientists with diversified industry experience in cutting edge Analytical Technologies.

We offer analytical support to our customers with the following instruments:

Chromatography	Spectroscopy	Physico-Chemical Analysis
<ul style="list-style-type: none"><li>○ HPLC</li><li>○ UPLC</li><li>○ GC</li><li>○ Ion Chromatography</li><li>○ Preparative-HPLC</li><li>○ Flash Chromatography</li><li>○ Gel permeation chromatography (GPC)</li></ul>	<ul style="list-style-type: none"><li>○ LC-MS</li><li>○ GC-MS</li><li>○ ICP-MS</li><li>○ FT-IR</li><li>○ UV-Visible</li></ul>	<ul style="list-style-type: none"><li>○ Particle Size Analyser (Dry/Wet)</li><li>○ Melting Point /Boiling Point</li><li>○ Autotitrator</li><li>○ Coulometer</li><li>○ ROI</li><li>○ Ion Meter</li><li>○ Bulk Density</li><li>○ Tap Density</li><li>○ Color Index by APHA (Hazen)</li></ul>



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Liquid chromatography-mass spectrometry (LCMS)



Gas chromatography-mass spectrometry (GCMS)



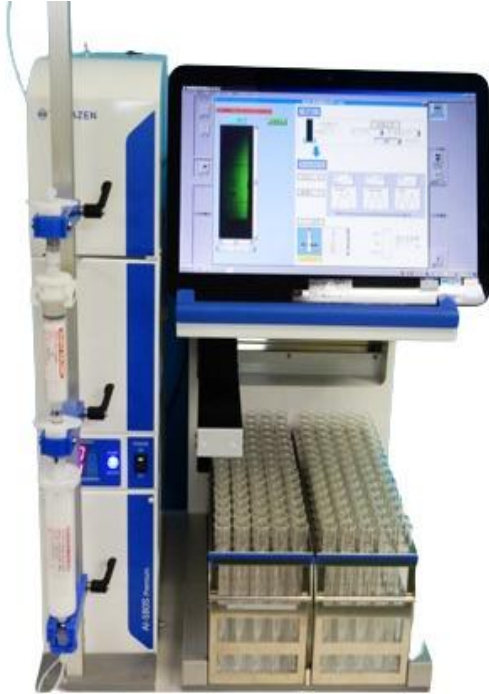
Ultraviolet-visible spectroscopy (UV)



Inductively Coupled plasma-Mass Spectrometry (ICPMS)

# Our Analytical Capabilities

We are committed to provide high-quality deliverables!



Flash Chromatography



Particle Size analyzer



Ion Chromatography

# Process Safety Services Offered

We believe in supporting development of inherently safe processes!

- Thermal Stability Studies by Differential Scanning calorimeter-DSC ,Thermal Screening Unit - TSU , Accelerating Rate Calorimeter-ARC
- Exothermic Reaction Studies by Reaction Calorimeter - RC1
- Gas Evolution measurement from desired reaction by Gas Evolution measurement apparatus with reaction calorimeter
- Data for vent sizing by Vent Size Package-VSP
- Fire and Explosion Hazard data generation and by Minimum Ignition Energy-MIE, Flash Point
- SDS generation according to Eu REACH , Chinese (Simplified) and USA regulation.

Our dedicated team has 15+ Scientists capable to investigate chemical processes for hazard identification.

Our Process Safety Services provide the following data generation services and infrastructure:

## 1) Chemical Reaction Hazard data generation and its interpretation

Thermal Stability Studies	Exothermic Reaction Studies	Gas Evolution and Vent Sizing Studies
<ul style="list-style-type: none"> <li>Differential Scanning calorimeter-DSC</li> <li>Thermal Screening Unit - TSU</li> <li>Accelerating Rate Calorimeter-ARC</li> </ul>	<ul style="list-style-type: none"> <li>Reaction Calorimeter - RC1 (Atmospheric and Hastelloy Pressure Vessel)</li> </ul>	<ul style="list-style-type: none"> <li>Gas Evolution measurement apparatus with reaction calorimeter</li> <li>Vent Size Package-VSP</li> </ul>

## 2) Fire and Explosion Hazard data generation

- Minimum Ignition Energy-MIE
- Flash Point





# Our Process Safety Capabilities

We believe in supporting development of inherently safe processes!



Accelerating Rate Calorimetry (ARC)



Thermal Screening Unit (TSu)



Vent size Package 2 (VSP2)

Differential Scanning Calorimeter (DSC)

# THANK YOU

## Send us Enquiry



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