



Accreditations, Recognitions & Memberships:



## Corporate Profile

MSK is a leading Independent Inspection, Testing and Certification Expert, with a global network of offices and laboratories in 27 countries across 5 continents, with headquarters in Kolkata, India.

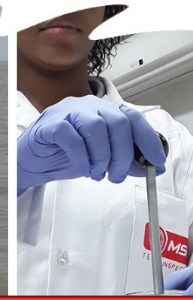
More than 80 years of experience and commitment to quality and accuracy, notch MSK as a reliable Quality Assurance Partner for more than 50 key industrial sectors and a wide range of commodities. It is an agile, technology driven and IT enabled company with a proven track record. With over 2500 strong workforce globally, MSK is a people-centric organization that prides in its human capital.

With global and country-specific accreditations, memberships and recognitions, MSK has specialized and trained personnel and state-of-the-art infrastructure, strict and rigorous procedures for sample collection to ensure precision of results at every port, siding, wharf, industrial unit, mines or any nominated site.

### Accreditations, Memberships & Recognitions:







## MSK Corporate Profile

**Vision**  
To be a respected and technically best- in- class Global  
Inspection & Testing Company



**Values**  
Passion, Care, Commitment,  
Integrity, Trust, Consistency

**Mission**  
To provide accurate and prompt service using state-of-the-art technology and  
assure customer satisfaction through skill, enthusiasm and pride of our  
employees who are our most valuable resource.





## Global Footprint (38 countries across 5 continents):

- |                 |                     |
|-----------------|---------------------|
| 1. Australia    | 20. Morocco         |
| 2. Albania      | 21. Mozambique      |
| 3. Bangladesh   | 22. The Netherlands |
| 4. Brazil       | 23. Oman            |
| 5. Chile        | 24. Peru            |
| 6. China        | 25. Poland          |
| 7. Croatia      | 26. Russia          |
| 8. DRC          | 27. Saudi Arabia    |
| 9. Egypt        | 28. Singapore       |
| 10. France      | 29. South Africa    |
| 11. Gabon       | 30. South Korea     |
| 12. Hong Kong   | 31. Taiwan          |
| 13. India       | 32. Tanzania        |
| 14. Indonesia   | 33. Turkey          |
| 15. Italy       | 34. UAE             |
| 16. Ivory Coast | 35. UK              |
| 17. Japan       | 36. Vietnam         |
| 18. Kenya       | 37. Zambia          |
| 19. Malaysia    | 38. Zimbabwe        |





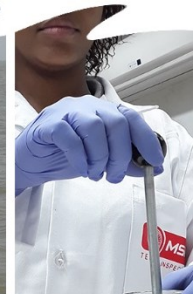
**MSK Inspection, Testing, Certification  
Services covers a wide range of  
commodities and services...**

- Iron Ore
- Ferro Alloys
- Non Ferrous
- Coal and other Solid Fuels
- Coke
- Flux Commodities
- Environment
- Food & Water
- Fertilizer
- Agriculture

**.... Serving major businesses, industrial and infrastructural sectors:**

- |                   |                    |               |
|-------------------|--------------------|---------------|
| • Mines           | • Fertilizer       | • Paints      |
| • Steel           | • Pharmaceuticals  | • Environment |
| • Metals & Alloys | • Health Care      | • Agriculture |
| • Thermal Power   | • Hospitality      | • Engineering |
| • Refineries      | • Tanneries        | • Marine      |
| • Cement Plants   | • Paper Mills      |               |
| • Petrochemicals  | • Textile Industry |               |
| • Food & Water    | • IT Industry      |               |







### Inspection & Quality Control:

- WSMD
- Sampling
- Sample Preparation
- TML Certification
- Online Surveillance



### Quantity Survey:

- Draft Survey
- Weighment
- Volumetric Assessment



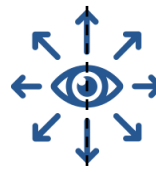
### Analysis:

- Chemical
- Physical
- Microbiological



### Supervision:

- Hatch Cleaning Inspection
- Cargo Loading/ Discharge
- Cargo conditions



### MSK Scope of Services



### Exploration:

- Bore Core Treatment
- Bore Core Sample Analysis
- Production Feed Analysis
- Process Quality Control

### Reporting & Certification:

- Real time Observation Report
- Inspection Report
- Digital Certificate



### Process Automation:

- Automated Sampling System
- Integrated Sample Preparation System



### Monitoring:

- Air Quality
- Stack Emission Quality
- Baseline Data



### Laboratory Outsourcing

- Lab Process Outsourcing
- Consultancy Services
- Quality Audit
- Lab Information Management



## Iron Ore and other Ferrous Commodities & Parameters

- Iron- Ore Pellets, Fines, Lumps, Oxides, Concentrates
- Blast Furnace Slag
- CLO
- FSF
- HBI
- Magnetite
- Pig Iron
- Bauxite
- Calcined Alumina

## Services

- Third party inspection
- Sampling
- Supervision of Loading / Unloading / Blending
- Quality Testing
  - Chemical
  - Physical
- Quantity Survey
  - Draft Survey
- Certification
- Umpire Analysis
- Laboratory outsourcing
- Quality Audit





## Major Clientele:



## MSK Corporate Profile



**AM/NS  
INDIA**

A joint venture between ArcelorMittal and Nippon Steel Corporation





## Ferro Alloys: Commodities & Parameters

- **High Carbon Ferro Chrome:** All Parameters & Slag
- **Chrome Ore:** All parameters
- **Manganese Ore:** All parameters
- **Ferro Chrome:** All parameters
- **Ferro Manganese :** All parameters
- **Ferro Molybdenum :** All parameters
- **Ferro Silicon :** All parameters
- **Ferro Titanium :** All parameters
- **Ferro Vanadium :** All parameters
- **Silico Manganese :** All parameters

## Services

- WSMD (Weighment, Supervision, Moisture Determination for Ores/ Concentrates)
- Supervision of Empty Containers, Stuffing of Finished Goods, Physical Verification for Export Consignments
- Party Assay
- Umpire Analysis





## Iron Ore and other Ferrous Commodities, Ferro Alloys Testing and Analysis Equipment:

- Microwave Digester
- ICP-OES
- Thermogravimetric Analyzer
- X Ray Fluorescence Spectrophotometer
- Powder X Ray Diffractometer
- Flame Photometer
- UV-Vis Spectrophotometer
- Ion Selective Electrode
- Carbon Sulphur Analyzer

With a fully functional crushing shed/sample preparation facility for ores, alloys and solid fuels.





Major Clientele:



MSK Corporate Profile

**GLENCORE**  
INTERNATIONAL plc



**eramet**



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**samancor** <sup>CR</sup>



**AML**  
Asia Minerals Limited

**JSL**  
JINDAL STAINLESS

 **SAMBHIC RESOURCES FZC**



**TATA STEEL MINING**



**KUDUMANE**  
MANGANESE RESOURCES



河北冀物金屬國際（香港）有限公司  
HEBEI JIWU METAL INTERNATIONAL (HONGKONG) CO., LTD.



中国五矿集团公司  
CHINA MINMETALS CORPORATION





## Non Ferrous Ores & Concentrates: Commodities & Parameters

- **Copper/Zinc/Lead Ores and Concentrates:** All parameters including Gold, Silver & PGMs
- **Tin/Cobalt/Nickel Ores and Concentrates:** All parameters

## Services

- WSMD (Weighment, Supervision, Moisture Determination for Ores/ Concentrates)
- Supervision of Empty Containers, Stuffing of Finished Goods, Physical Verification for Export Consignments
- Party Assay
- Umpire Analysis
- Impurity Analysis in Pure Metals and thereby finding Purity of Base Metal



## Non Ferrous Metals: Commodities & Parameters

- **High Purity Copper/Copper Cathode:** All impurities & Copper (By Balance)
- **High Grade Zinc/Zinc Ingot:** All impurities & Zn (By Balance)
- **Lead & Lead Alloys/Lead Ingots/refined Lead:** All impurities & Pb (By Balance)
- **High Grade Primary Aluminum/ Aluminum Ingots:** All impurities & Al (By Balance)
- **Tin/Tin Ingots:** All impurities & Sn (By Balance)
- **Primary Nickel:** All impurities & Ni (By Balance)
- **Pure Cobalt:** All impurities & Cobalt (By Balance)

## Services



LME listed Sampler & Assayer (LSA)- Exclusive Assayer for India  
<https://www.lme.com/en/>

- WSMD (Weighment, Supervision, Moisture Determination for Ores/ Concentrates)
- Supervision of Empty Containers, Stuffing of Finished Goods, Physical Verification for Export Consignments
- Party Assay
- Umpire Analysis
- Impurity Analysis in Pure Metals and thereby finding Purity of Base Metal





## Spent Catalyst: Commodities & Parameters

- Automobile Catalyst: Platinum Analysis
- Refinery Catalyst: Platinum Analysis

## Services

- WSMD (Weighment, Supervision, Moisture Determination for Ores/ Concentrates)
- Supervision of Empty Containers, Stuffing of Finished Goods, Physical Verification for Export Consignments
- Party Assay
- Umpire Analysis
- Impurity Analysis in Pure Metals and thereby finding Purity of Base Metal



## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Non Ferrous Testing and Analysis Equipment:

- Microwave Digester
- ICP-OES
- ICP MS
- Mercury Analyzer
- Fire Assay set up with Pit type furnace, cupellation furnace and high temperature annealing furnace
- 6-digit Balance
- Ion Selective Electrode
- X Ray Fluorescence Spectrophotometer
- Powder X Ray Diffractometer
- Flame Photometer
- C S Analyzer

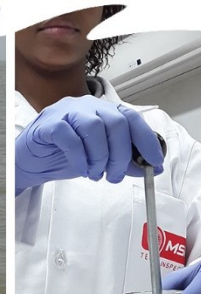
With a fully functional crushing shed/sample preparation facility for ores, alloys and solid fuels.







Major Clientele:



MSK Corporate Profile





## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Coal: Commodities & Parameters

- Non Coking Coal
- Coking Coal
- PCI Coal
- Anthracite Coal
- Graphite

### Services

- Total Moisture Analysis
- Proximate Analysis
- Ultimate Analysis
- Sulphur & Ash Analysis
- Value & Size Analysis
- Petrography
- Plastometry & Dilatometry
- Draft Survey
- Chemical & Physical Analysis



## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Coke:

- Metallurgical Coke
- Breeze Coke
- Nut Coke
- Coke Fines
- PET Coke

### Services

- Total Moisture Analysis
- Proximate Analysis
- Ultimate Analysis
- Sulphur & Ash Analysis
- Value & Size Analysis
- Plastometry & Dilatometry
- Draft Survey
- Chemical & Physical Analysis

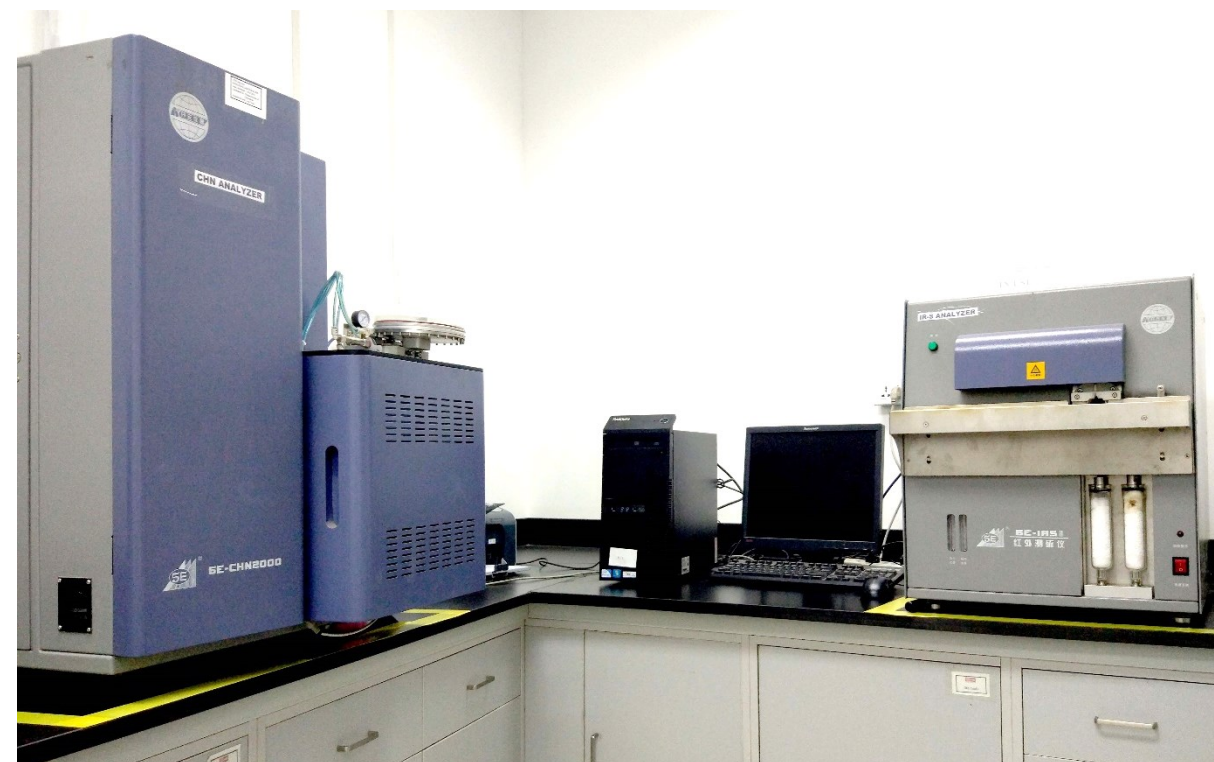




### **Coal & Coke Testing and Analysis Equipment:**

- C H N S Analyzer
- Automatic Bomb Calorimeter
- Ash Fusion Temperature Measurement System
- CRI CSR Measurement System
- X Ray Fluorescence Spectrophotometer
- ICP-OES
- Macro Thermogravimetric Analyzer
- Ion Selective Electrode
- Flame Photometer

With a fully functional crushing shed/sample preparation facility for ores, alloys and solid fuels.





Major Clientele:



MSK Corporate Profile



HINDUSTAN ZINC



GLENCORE

adani



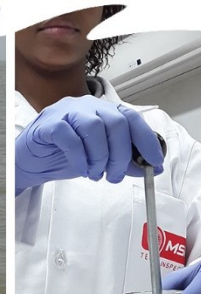
stanmorecoal







Major Clientele:



MSK Corporate Profile







## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Laboratory Outsourcing Services

- **Testing of Raw Materials, Process Intermediates and Products ( Finished Products, By- Products, Waste Products) in Steel Manufacturing, Thermal Power Plants, Cement Plants, Mines**
- **In house lab set-up and operation**
- **Lab Accreditation**
- **Skilled Manpower ( Chemists, Samplers and Supervisors)**
- **CAPEX to set up in-house QC Lab**
- **Sampling Automation**
- **Digitized Results**
- **Single Window Customer Support**

### Advantages

- Lower TAT ( Turn Around Time)
- Accurate Results
- Unbiased Third Party Testing and Inspection
- Testing Process Standardization

### Benefits

- Enhanced Quality of Products
- Efficient Plant Processes
- Reduced Costs
- Liability Reduction



## Flux: Commodities & Parameters

- **Limestone**
- **Dolomite**
- **Pyroxenite**

(For all above commodities: All parameters- Chemical & Physical including Water Absorption Capacity, Tumbler Index, Shatter Index, Decripitation Index)

- **Gypsum:** Purity, Chemical, Physical
- **Oliflux:** Chemical & Physical
- **Cement Clinker:** Chemical, Size Analysis  
Parameters:  $\text{Fe}_2\text{O}_3$ ,  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$ ,  $\text{CaO}$ ,  $\text{MgO}$ , Free Lime, S, LOI, Chloride, Acid Insoluble,  $\text{Na}_2\text{O}$ ,  $\text{K}_2\text{O}$

## Services

- Chemical & Physical Analysis
- Size Analysis
- Draft Survey



## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Flux Commodities Testing and Analysis Equipment:

- Microwave Digester
- ICP-OES
- Ion Selective Electrode
- X Ray Fluorescence Spectrophotometer
- Powder X Ray Diffractometer
- Flame Photometer
- Thermogravimetric Analyzer
- Uv-Vis Spectrophotometer

With a fully functional crushing shed/sample preparation facility for ores, alloys and solid fuels.







Major Clientele:



MSK Corporate Profile



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## Environmental Parameters

### Air

- Stack Emission as per EPA
- Ambient Air as per EPA
- Fugitive / Work Zone as per Factory Rules
- Indoor Air Quality as per OHSAS
- VOC in Air
- Heavy Metal in Air

### Noise

- By Automatic Data Logger

### Meteorological Monitoring

- By Automatic Data Logger

### Effluent Water

- Inlet & Outlet of ETP & STP

### Hazardous Waste Analysis

- Factory Waste
- Municipal Waste
- Used & Waste Oil

### Soil

- All Heavy Metals, Pesticides, Nutrients

### Water

- Drinking water as per WHO
- Ground Water
- Surface Water
- Packaged Drinking Water
- Processed Water for any type of industry

### Value-added Services

- Hazardous Waste Audit
- ETP/ STP Performance Consultancy
- Baseline Monitoring for EIA/SEIAA



## Environment

### Special Services for Marine Biology

#### Biodiversity Management Plan

Reviewing how the physical and chemical environmental mechanisms contribute to the sustainable environment for the flora and fauna in the projected area and choosing suitable methodology and analytical techniques for testing under prevailing geographical conditions.

#### Biological Parameters

- Chlorophyll
- Primary Productivity
- Phytoplankton
- Zooplankton
- Benthic Micro
- Benthic Macro
- Flora
- Fauna
- Fish Catchment Data Analysis

#### Involvement of Man & Management

- Marine Scientist
- Research Scholar
- Field Instrument like Depth Sampler
- High Grade Laboratory
- Review of Report through reputed institution

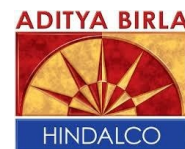




Major Clientele:



MSK Corporate Profile





**MSK Inspection, Testing, Certification Services:**

**MSK Corporate Profile**

## **Food, Beverages & Water**

360-degree Quality Testing/ Analysis/ Advisory Services to all kinds of Food/ Beverage/ Tea & Coffee/ Dairy processing industries, top Hotels/ Restaurants/ Hospitals, Agricultural Produces, Oil manufacturers, Traders/ Exporters/ Importers and Food Retailers to ensure that their products are suitable for consumption/ usage as per Govt.



## Food & Beverages: Chemical Testing

### Commodities

- Beverages
- Cereals & Agro Products
- Oils & Fats
- Chocolate & Confectionary
- Meat & Fish
- Dairy Products
- Processed Foods
- Milk Based Products
- Fruits Vegetables & Herbs

### Parameters

- Pesticide Residue
- Antibiotic Residue
- Nutritional Labeling
- Heavy Metals
- Packaging Migrations
- Adulterants
- Process Contaminants(PAH)
- Food Additives
- Artificial sweeteners/colors
- Toxins
- Preservatives
- Fatty acid profiles (PUFA/ MUFA/TRANS FAT/SAFA)

### Services

- Nutritional Value Determination
- Shelf-Life Determination
- Qualitative & Physical Parameter Testing
- Microbiological and Chemical Testing and Analysis (as per FSSAI & Other National/ International standards) Complete range of Water, Air and Soil testing as required by different F&B companies/ Establishments from time to time.





## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Food & Beverages: Biological Testing

#### Commodities

- Bakery & Confectionery
- Cereals & Ready to eat Food products
- Beverages(alcoholic/non-alcoholic)
- Meat & Fish products
- Tea & Coffee
- Dairy products
- Fruit, Vegetables & related products
- Spices & Condiments

#### Parameters

- Bacillus cereus
- Clostridium
- Salmonella
- Vibrio
- Shigella
- Listeria
- E.coli & coliforms
- Staphylococcus
- Thermophiles & acidophiles
- Yeast & Mould (pathogenic)
- Pathogenic aerobes & anaerobes

#### Services

- Nutritional Value Determination
- Shelf-Life Determination
- Qualitative & Physical Parameter Testing
- Microbiological and Chemical Testing and Analysis (as per FSSAI & Other National/ International standards) Complete range of Water, Air and Soil testing as required by different F&B companies/ Establishments from time to time.



## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Water Testing

#### Commodities

- Drinking Water
- Packaged Drinking water/  
Natural Mineral Water
- Processed Food Water
- Dialysis Water

#### Parameters

- Bacillus cereus
- Clostridium
- Salmonella
- Vibrio
- Shigella
- Listeria
- E.coli & coliforms
- Staphylococcus
- Thermophiles & acidophiles
- Yeast & Mould (pathogenic)
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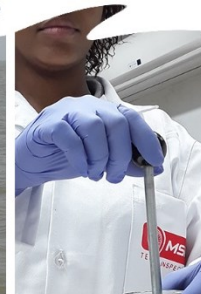
#### Services

- Physical Testing
- Heavy Metals Testing
- Chlorinated Compounds
- Pesticide Residues
- Bacterial Contaminants
- Pathogens
- Endotoxins
- Pyrogen Tests

Note: All methods as per APHA, BIS (IS 10050, 14543/ 13428) AOAC and other international and national bodies



## Major Clientele:



## MSK Corporate Profile







## MSK Inspection, Testing, Certification Services:

## MSK Corporate Profile

### Fertilizer Testing

#### Commodities & Parameters

- Rock Phosphate ( $P_2O_5$ ,  $CaO$ ,  $MgO$ ,  $Al_2O_3$ ,  $SiO_2$ ,  $SO_3$ ,  $Na_2O$ ,  $K_2O$ ,  $Fe_2O_3$ )
- Phosphoric acid (Phosphoric acid content, Chloride, Nitrate etc.)
  - Mono Ammonium Phosphate (Moisture, Total  $P_2O_5$ , Water soluble  $P_2O_5$ , Citrate Soluble  $P_2O_5$ , Total Nitrogen, Ammonical Nitrogen )
  - Di Ammonium Phosphate (Moisture, Total  $P_2O_5$ , Water Soluble  $P_2O_5$ , Citrate Soluble  $P_2O_5$ , Total Nitrogen, Ammonical Nitrogen, Alumina, Ferric Oxide & Titanium Di Oxide)
- MOP (Moisture, Potassium Oxide and Sodium Chloride)
- Sulphur (S, Ash, Purity, Chloride, Cd, Te, Se, Acidity as  $H_2SO_4$ )
- Urea (Moisture, Total Nitrogen & Biuret)
- Single/Triple Super Phosphate
- Nitrogen based fertilizers
- Potassic fertilizers

#### Services

**Inspection:** Cargo Offering at Manufacturers / Mines, Vessel inspection Prior and after loading, Loading & Discharge Inspection, Container Checking, Weight inspection during and before despatch.

**Supervision / Survey:** Cargo Offering at Manufacturers / Mines, Vessel Loading & Discharge supervision, Container loading and discharge supervision, Draught Survey / Weighing Supervision, Cargo loading at the time of domestic despatch from Port.

**Sampling:** Cargo Offering at Manufacturers / Mines, Bulk Cargo, Containerised Cargo. Cargo in the form of Stack

**Assaying / Testing:** Physical quality determination, Chemical, Micro-Biological

**Lab Outsourcing**



## MSK Inspection, Testing, Certification Services:

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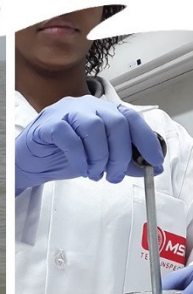
### Fertilizer Testing and Analysis Equipment:

- Double Beam UV Visible Spectrophotometer
- N Digestion system
- Flame Photometer
- ICP OES
- Four Digit Balance





Major Clientele:



MSK Corporate Profile







# CONSISTENCY IS

## for:

- Accurate results- On Time- Every Time
- Reproducible Results
- 48 hours turn around time for test result

## We ensure Consistency through:

- State-of-the Art Labs
- Ultra-Modern Equipment
- Trained and Competent Manpower
- Average training of 50 hours imparted to all personnel in a year
- Stringent Standard Testing Procedures
- Routine Calibration of Equipment every 6 months
- Daily reporting
- Qualified, Experienced & Skilled Manpower
- Agility and Empowerment of People
- Global and Country-specific Accreditations, Memberships & Recognitions
- [Cloud Based ERP](#) Mistake proofing system and safe working conditions



## MSK Advantage:

MSK Corporate Profile

### Committed to cultivate a culture of Learning and Development to pursue Knowledge and Excellence

- Technical knowledge in Chemistry and relevant Instruments for accuracy
- Applied R&D to develop more accurate methods of testing which are cost effective, quicker and safer
- Knowledge of Commercial and Business processes involved in industries we serve

### Knowledge that helps personality and skill development

- Grooming of Technically qualified people
- Regular participation in Workshops, Trade Fair, Conferences, Business Meets
- Applied R&D blog
- Experimenting and adopting new techniques using latest equipment





## CONTACT DETAILS:

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thank you