

COMPANY PROFILE



AUTOCAL SOLUTIONS PVT. LTD.

Bringing Sharpness To The Quality Of Life Science







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Why AUTOCAL?



In a word... VALUE and the value comes from... People... AUTOCAL people.

Who are we?

Choosing a calibration company is a very important factor in maintaining QA requirements. Good calibrated equipment saves money and establishes the success of your company. So why don't you rely on the company that provides the best calibration service? AUTOCAL is the most advanced calibration laboratory for all types of measurement devices in India. For nearly Seventeen years in the market, AUTOCAL has been committed in providing honesty, dependability & excellence to our Customers.

We believe in technological improvement and quality to drive our businesses to the next level. Our company not just raises the standard but soars beyond them with trained personnel, creating continual development to strive an excellent, professional and motivational environment. Also our laboratories are equipped with the most advanced instruments creating a customized based company to fill its needs.

We aim to provide, our customers test & calibrations of the highest quality, with competitive pricing and on time delivery the first time and every time. We want to be an integrated solution where you will feel that we are another department in you company.

We keep ourselves ahead of the competition with our facilities and services. We have been accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL) which is an autonomous body under the Department of Science and Technology which in turn has a Mutual recognition Agreement (MRA) with APLAC (Asia Pacific Laboratory Accreditation Council) and ILAC (International Laboratory Accreditation Council), is once again, a way to assure our customers with highest possible level of accuracy and precision in this calibration and certification of their instruments.

Our reminders system will let you know by phone and email when the calibration testing and certification renewal of your instruments are due. We offer pick-up and delivery services for your convenience. You can trust our calibration to fully trained professionals with expertise, talent, and resources letting your company focus on your core competency.

We can help you with your Calibration, Validation (Process, HVAC, PLC), Testing (Compressed Air, steam quality, Water, Microbiological, Food) and training in our field of operations & other quality assurance needs. Since our inception in 2002, we have provided critical calibration, validation and advisory services to more than 4000 customers from the Pharmaceuticals, Biomedical, Food, Chemical & Drug, Engineering, automotive industry, airlines and many more.

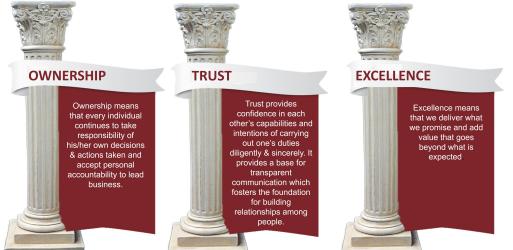


Our Vision is to be customer's first choice in arena of calibration, testing and validation globally by helping our clients to provide superior product, services and solutions.

Our VISION



CORE VALUES





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Legal Status

70

| Name of the company | : | AUTOCAL SOLUTIONS PVT. LTD. |
|--|---|--|
| Legal Status | : | Private Limited Company registered under the Company act. 1956 |
| Chairman | : | Vinit A. Shirsat |
| Managing Director | : | Prashants Kamath (Mob. No.09321250600) |
| Head Office (Correspondence Office) | : | Unit No.4, 5, 10 & 11, Ruby Industrial Estate PCS Ltd. Navghar, Vasai Road (East), District-Palghar, Pin-401210, Maharashtra, India |
| Phone | : | +91 0250 2392288-89, 2393247, 2393502-03 |
| Website | : | www.autocal.net |
| E-mail | : | sales@autocal.net |
| Bankers | : | ICICI BANK LTD., Vimal Shopping Centre, Main Road, Vasai(West), Dist. Thane – 401202 A/c. No.: 002251000002, A/c Type: Cash credit RTGS/ NEFT No.:ICIC0000022 |
| CIN No. | : | U72200MH2008PTC178116 |
| Pan No. | : | AAGCA9480P |
| TAN No. | : | MUMA32604F |
| Professional tax No. | : | 27270678266P |
| IEC (Import Export Code) No. | : | 0308011619 dated 21/05/2008. |
| Shop & Establishment No. | : | 1710200310921608 & 1710200310921890 |
| ESIC No. | : | 35000029630000607 |
| Provident fund No. | : | KD/MAL/0094005 |
| GST No | : | 27AAGCA9480P1ZV |



WE ARE MEMBERS OF FOLLOWING.....



Membership No.AOIL/M/180

Membership No.AUT-M-12-2013-1189



Indo-German Chamber of Commerce Deutsch-Indische Handelskammer Mumbai - Delhi - Kolkata - Chennai Bangalore - Pune - Düsseldorf

Membership No.1/043866





Membership ID. 1024803



Membership No.LM-0012



Membership No.13712



Membership No.CORP/CM/5332/2018-19



Membership No.LM955



Membership No. 67-565-2119



Membership No. AS-1182



Our Location



| Location | Address | Email Id |
|--------------|---|-----------------------------------|
| Vasai | Unit No. 4,5,10 & 11, Ruby Industrial Estate, | sales@autocal.net |
| (Head | Navghar, Vasai Road (East), Palghar- 401210, | |
| Office) | Maharashtra | |
| Goa | Unit no 1,Reema House,Ground Floor,Near | goa@autocal.net, goa1@autocal.net |
| | Bharat Steel, Verna Industrial Estate, | |
| | Verna-403722, Goa | |
| Goa | Shed No - 11, Behind IDC office, Kundaim | samservices@autocal.net |
| | Industrial Estate, Kundaim- 403115, Goa | _ |
| Indore | EM-75, Indus Town, Phase-I, | indore@autocal.net |
| | Pithampur-454775, Madhya Pradesh | |
| Baddi | Cabin No 32, SCO 45, Second floor, Canam | baddi@autocal.net |
| | Plaza, Sector-11, Panchkula-134112, Harayana | |
| Vadodara | 109/110, 1st Floor, Siddhi Vinayak | vadodara@autocal.net |
| | Complex,Opp. Vadodara Railway Station, | |
| | Vadodara (W),Gujarat- 390005 | |
| Nashik | B-80, Near Union Bank, MIDC, Satpur, Nashik - | adminnsk@autocal.net |
| 0'11' | 422007 | |
| Sikkim | Near Govt Hospital, Opposite Green Hills Hotel, | sikkim@autocal.net |
| Damas | Rangpo, East Sikkim- 737132 House No. 417, Ganganagar, Dewas, M.P. | |
| Dewas | 455001 | mahendra.sonekar@sunpharma.com |
| Hyderabad | | sales@autocal.net |
| Vapi | | sales@autocal.net |
| Guwahati | Post Office Mirza, Village- Kochpara, Landmark | plcval1@autocal.net |
| | Behind Shahid Bedi Park, Opp. Social Welfair | |
| | office, Dist Kamrup(Rural), Police | |
| | Station-Palashbari, Pincode-781125 | |
| Vizag | D.No.31-28-17, Ground Floor, | |
| | Rani Niwas, Kurmannapalem, | vizag@autocal.net |
| | Visakhapatnam-530046 | |
| Paonta Sahib | House No. 1351, Ward No. 11, Ekta Colony, | pradeepv@autocal.net |
| | Paonta Sahib, HP | |
| Halol | 39, Sharda Nagar Society, Near Garba Ground, | halol@autocal.net |
| | Halol Distt. Panchmahal - 389350 | |
| Ahmedabad | 5, Shivam Complex, Sakhrej Bavala Road, | vadodara@autocal.net |
| | Moriya Patiya, Taluka: Sanad, Dist: Ahmedabad | |
| Rabale | Plot No. PAP-R-149 & 150, Rabale MIDC, | rashmig@autocal.net |
| | (Behind Hotel Sai Prasad) Pipeline Road, TTC | |
| D 1 | Industrial Area, Navi Mumbai – 400701 | |
| Bengaluru | First Floor, at Sy. No.60/A, Bommasandra | bangalore@autocal.net |
| | Industrial Area, Jigani Road, Bengaluru-560099 | |

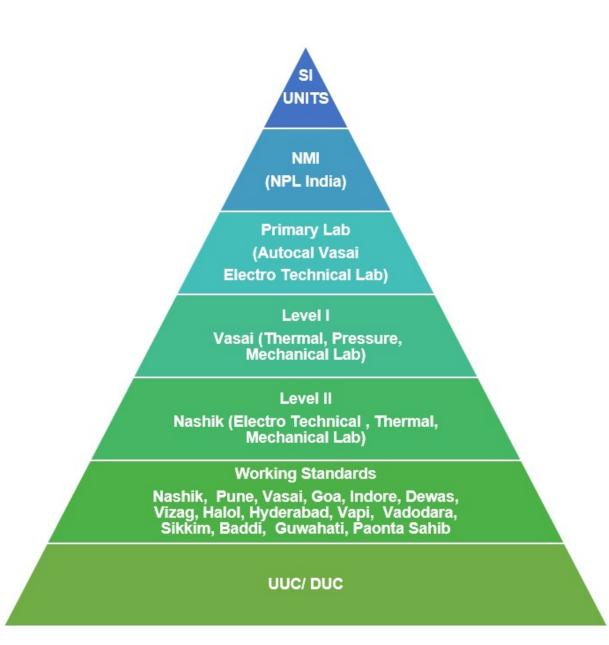


LOCATE US AT:





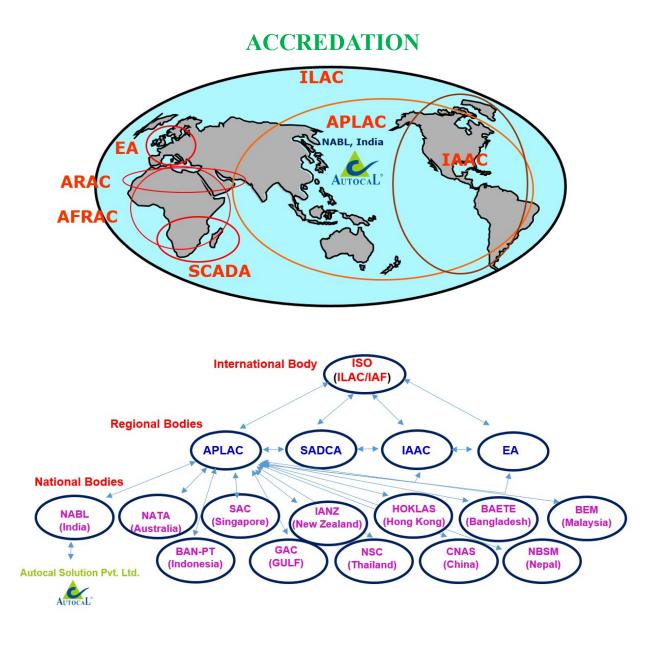
TRACEBILITY TO INTERNATIONAL STANDARDS



| TITLE | WEBSITE | |
|--|------------------|--|
| SI (International System of Units) | www.bipm.org | |
| NMI (National Metrology Institutes) | www.nmi.nl | |
| NPL India (National Physical Laboratory) | www.nplindia.org | |
| UUC (Unit Under Calibration) | | |
| DUC (Device under calibration) | | |



WHO GOVERNS US?





CALIBRATION



Calibration is the process for determination of correct value of each

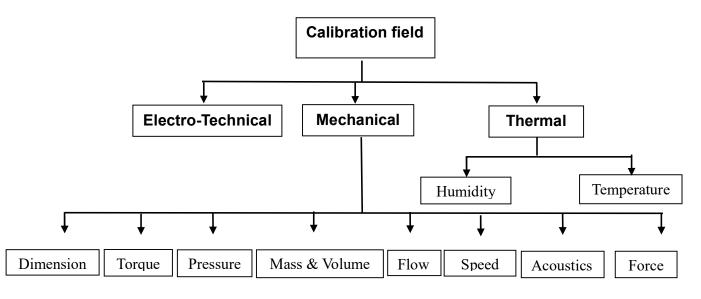
scale reading of measuring instruments by measurement or comparison with standard instruments. Consistency in the product you manufacture is imperative. From this aspect probably your product's government approval, its quality, acceptance and growth in the market are dependent.

Accuracy is the key to maintaining consistency. There are plenty of other elements involved in the production of your company's products; accuracy in the measurement of its ingredients should not be an extra concern. Nevertheless, it is a very well known fact that the lack of calibration and alignment of equipment causes plenty of drawbacks. We like to make sure that you never have to suffer such types of drawbacks.

Our calibration services involve:

- Identification of Calibration requirements by system and equipment (critical and non-critical)
- Identification of plant wide calibration requirements.
- Criteria for a calibration program and traceability to the National/International standard
- Generation and implementation of a plant-wide calibration program
- Certification of the plant-wide calibration program

AUTOCAL prides itself in its ability to perform quality work within budgetary and time constraints. We are the experts and have the references and success stories of our clients to attest to our abilities. With over five years of experience in the Calibration and Validation industry, AUTOCAL now can also provide your organization with personnel who have "been there & done that" experience in all phases of Calibration Database Implementation and Validation.





CALIBRATION RANGES







SCOPE OF CALIBRATION (NASHIK LABORATORY) NABL Accredited Laboratory As per ISO/ IEC: 17025 : 2005 Electro-Technical:

| Electro-Technical: | Denes | Colling Management |
|------------------------------------|---|---|
| Parameter/Test | Range | Calibration Measurement Capability (±) |
| SOURCE: At Lab & Site | | |
| DC Voltage | | |
| DC Voltage DC Current | 1 mV-1000V | 0.92% - 0.012 % |
| Resistance | $10 \mu\text{A} - 1000\text{A}$ | 0.32% - 0.35 % |
| Resistance | $10 \ \mu A = 1000 A$ $10 \ \Omega = 400 M \Omega$ | 0.15% - 0.90% |
| Descrete Resistance Box | $10.22 - 400M\Omega^2$ 1 $\Omega - 1000M\Omega$ | 0.13% - 0.90% |
| Descrete High Resistance Box | $1 \Omega \Omega - 400 \Omega \Omega$ | 0.38% - 1.20% 5.80% |
| AC Voltage | 10mV - 1000V @50Hz -1kHz | 1.16% - 0.07 % |
| AC voltage | 10mV - 1000V @ 30HZ - 1KHZ 10mV - 100V @ 1kHz - 20kHz | 2.84% - 0.11 % |
| | 10mV - 100V @ 1kHz - 20kHz 10mV - 100V @ 20kHz - 50kHz | 2.84% - 0.11 % 5.65% - 0.21 % |
| AC Current | Ŭ | 0.56% - 0.30 % |
| AC Current | $100\mu A - 20A @ 50Hz - 1kHz$ | 0.86% - 0.71 % |
| | 1mA - 20A @ 1kHz -10kHz 20A - 900 A @ 50Hz | 0.85% - 0.65 % |
| E | Ŭ | 0.85% - 0.05% |
| Frequency | 10Hz - 100kHz | |
| Capacitance | 100kHz - 1 GHz | 0.007% - 0.0003% |
| | $600\mu F - 1mF @ 1kHz$ | 1.07% - 1.55% |
| | $1\mu F - 600\mu F @ 1kHz$ | 0.36% |
| T 1 | $100\text{pF} - 1\mu\text{F}@\ 1\text{kHz}$ | 0.36% - 0.59 % |
| Inductance | 0.1mH - 5H @1kHz | 1.20% |
| | RTD: - 200°C - 850°C | 0.20 °C - 0.40 °C |
| | T/c : - 200°C - 1370°C | 0.70 °C |
| Simulation method for calibration | 5mV -100V DC | 1.16% - 0.30% |
| of Indicator /Recorder/Controller | 5mV -100V AC | 0.36% |
| of indicator / Recorder/Controller | $0.1 \mu \text{sec} - 2 \text{ sec}$ | 0.07 % - 0.06% |
| | 50kHz - 250MHz band width | 3.50% |
| 0.11 | 0.1mV - 1000V | 0.68 % - 0.0014% |
| Oscilloscope | 1kV - 15 kV | 2.90 % |
| | 0.01mA - 20A | 0.007% - 0.35% |
| Measure (At Lab): | 0.01111A - 20A | 0.00770-0.3370 |
| DC Voltage | 10mΩ - 1GΩ | 0.85 % - 0.66% |
| DC High Voltage | TOTALE TOPE | 0.05 /0 0.00/0 |
| DC Current | 1mV - 700V @50Hz -1kHz | 1.10% - 0.05% |
| | 1mV - 500V @1kHz- 20kHz | 0.44% - 0.075% |
| Resistance | 1mV - 100V @20kHz- 50kHz | 0.70% - 0.045% |
| A C Malta a | 700V -1000V @20kHz- 50kHz | 0.82% |
| AC Voltage | 100 Ω | 0.03% |
| Resistance# | 100 S2 | 0.003% |
| | 1 ks2 $100 \text{ k}\Omega$ | 0.0007% |
| | 100 KΩ 1 MΩ | 0.0004% |
| | 1 W152 1 GΩ | 0.0004% |
| | 1002 $100m\Omega$ to 1Ω | 0.0004% |
| | 1000000000000000000000000000000000000 | 0.0003% |
| | 10Ω to $10k\Omega$ | 0.0003% |
| | $10k\Omega$ to $10M\Omega$ | 0.0003% |
| | $10M\Omega$ to $100M\Omega$ | 0.007% |
| | $100M\Omega$ to $100M\Omega$ | 1.16% to 0.12% |
| | | 0.012% to 0.003% |
| | $1G\Omega$ to $1T\Omega$ | |
| | | 0.003% to 0.0011% |



| Parameter / Measured Quantity / | Range | Calibration Measurement |
|---------------------------------|----------------------------|----------------------------------|
| Device Under Calibration | | Capability (±) (CMC) |
| Resistance# | $1G\Omega$ to $1T\Omega$ | 0.0011% to 0.005% |
| | | 0.005% to 0.013% |
| | | 0.013% to 1.8% |
| | | 1.8% to 5.8% |
| Frequency [#] | 10Hz to 500MHz | 0.00058% to 0.0003% |
| Time Period [#] | 0.1s to 2ns | 0.00058% to 0.0003% |
| Capacitance [#] | 1kHz | |
| | 1nF to 1 μF | 1.73% to 0.41% |
| | 50 Hz | |
| | 1 μF to 1mF | 0.64% to 0.67% |
| | (a) 1 kHz | |
| | 1 nF | 0.14% |
| | 10 nF | 0.07% |
| | 100 nF | 0.06% |
| | 1 μF | 0.06% |
| | 10 μF | 0.06% |
| | 100 μF | 0.09% |
| | 1 mF 10 mF | 0.5% 0.7% |
| Inductance [#] | (a) 1 kHz | 2.31% to 1.85% |
| Inductance | (a) 1 KHZ 100µH to 10mH | 2.51% to 1.85% 1.85% to 0.93% |
| | 10mH to 10H | 1.8570 10 0.9570 |
| Temperature Simulation Method | 1011111101011 | |
| (Indicator Controller/ | | |
| Recorder) [#] | | |
| Input RTD (PT-100) | | |
| Thermocouple | -200°C to 800°C | 0.005°C to 0.04°C |
| K - Type | 200 0 10 000 0 | 0.005 C 10 0.04 C |
| J –Type | -200°C to 1370°C | 0.035°C to 0.030°C |
| N-Type | -200°C to 1200°C | 0.026°C to 0.020°C |
| Е-Туре | -200°C to 1300°C | 0.050°C to 0.027°C |
| Т-Туре | -250°C to 1000°C | 0.33°C to 0.017°C |
| R-Type | -250°C to 400°C | 0.08°C to 0.013°C |
| S-Type | -50°C to 1768°C | 0.13°C to 0.06°C |
| В-Туре | -50°C to 1768°C | 0.12°C to 0.06°C |
| . 1 | 600°C to 1800°C | 0.08°C to 0.05°C |
| | @ 50Hz | |
| AC POWER | 120V to 240V | |
| (1 phase) [#] | 0.01A to 20A | |
| @ UPF | 1.2W to 4.8kW | 0.21% |
| | 120V to 240V | |
| | 0.1A to 20A | |
| @0.8 PF | 9.6W to 3.8kW | 0.29% |
| | 120V to 240V | |
| @0.5 PF | 0.1A to 20A | 0.41% |
| | 6W to 2.4kW | |
| @0.2 PF | 120V to 240V | 1.2% |
| | 0.1A to 20A | |
| | 2.4W to 960W | |
| Power Factor [#] | @ 50Hz | 0.002PF |
| | 0.2PF to UPF | |
| | (Lead/ Lag) | |



| Parameter / Measured Quantity / Device Under Calibration | Range | Calibration Measurement Capability (±) (CMC) |
|---|----------------------|---|
| Oscilloscope [#] | 1MΩ output | 0.55% to 0.07% |
| Osemoscope | 10mV to 130V | 0.5570 10 0.0770 |
| | $1M\Omega$ output | |
| DC Amplitude | (a) 1kHz (V p-p) | 0.58% to 0.14% |
| | 10mV p-p to 130V p-p | |
| AC Amplitude | 2ns to 10ms | 0.03% to 0.06% |
| | 10ms to 5s | 0.06% to 0.6% |
| Time Base | 50 kHz to 600 MHz | 2.3% to 7% |
| Bandwidth | | |
| Transformer Turns Ratio Meter [#] | 0.8 to 2000 | 0.06 |
| Mechanical: | | |
| Parameter/Test | Range | Calibration Measurement Capabili |
| | | (±) |
| Caliper - LC 10µm Vernier/Dial | Up to 600mm | 14.33µm |
| Digital | | |
| | | |
| Depth caliper- LC 10µm | Up to 300mm | 9.00µm |
| Vernier/Dial Digital | | |
| | | 14.41 |
| Height gauge - LC 10µm | Up to 600mm | 14.41µm |
| Vernier/Dial/ Digital | | |
| External Micrometer LC :10µm | Up to 500mm | 9.62 μm |
| External whereineter LC.10µm | | 2.02 μm |
| Dial gauge plunger | | |
| LC :1µm | Up to 25 mm | 2.15 µm |
| Dial gauge Lever | | 2.10 µ |
| LC: 1µm | 0 to 0.80 mm | 2.10 μm |
| | | |
| Bore Gauge with Dial | | |
| (Transmission Accuracy) | Up to 2mm | 2.30 μm |
| LC:1µm | _ | |
| | | |
| External Micrometer LC :10µm | Up to 500mm | 9.62 μm |
| Dial gauge plunger | | |
| LC :1µm | Up to 25 mm | 2.15 μm |
| Dial gauge Lever | | 2.10 |
| LC: 1µm | 0 to 0.80 mm | 2.10 μm |
| Bore Gauge with Dial | Un to 2mm | 2 30 um |
| (Transmission Accuracy) | Up to 2mm | 2.30 μm |
| LC:1µm Dial Thickness gauge | | |
| LC: 1 µm | | |
| LC: 10 μm | Up to 1mm | 1.02 μm |
| Bevel protractor | Up to 10mm | 7.03 μm |
| LC: 5min | 0-30-45-60-90° | 2.95' of Arc |
| Feeler gauge | | |
| Depth Micrometer | Up to1 mm | 3.39 µm |
| LC : 10µm | Up to 300mm | 8.10 μm |
| RPM (Non Contact) | - P C C C | |
| Sound Level Meter | 60 - 60,000 RPM | 1.93 RPM - 41.55 RPM |
| - | 94 & 114 dBA | 2.36 dB |
| | | |



| Parameter/Test | Range | Calibration Measurement Capability |
|-----------------------------------|-------------------|------------------------------------|
| | | (±) |
| Mechanical -Pressure (At lab & | | |
| site) | | |
| Pneumatic Pressure | | |
| (Dial & Digital Pressure | 0 to 35 bar | 0.08 bar |
| Indicators) | | |
| Hydraulic Pressure | | |
| (Dial & Digital Pressure | 0 to 600 bar | 0.08 bar |
| Indicators)_ | | |
| | | |
| Thermal | 40°C to 200 °C | 1.0 °C |
| (At lab only) | | |
| Glass Dial & Digital Thermometers | -80 °C to 0 °C | 0.30 °C |
| Thermal | 0 °C to 140 °C | 0.40 °C |
| (At lab & Site) | 140°C to 400 °C | 0.50 °C |
| RTD & TC Sensors with & without | 400 °C to 1000 °C | 1.80 °C |
| Indicators | 1000°C to 1200 °C | 2.60 °C |
| TC Sensors with & without | | |
| Indicators | | |

SCOPE OF CALIBRATION (VASAI LABORATORY) NABL accredited Calibration Laboratory as per ISO/IEC: 17025: 2005 ELECTRO – TECHNICAL:

| Parameter / Measured Quantity / Device Under Calibration | Range | Calibration Measurement Capability (±) (CMC) |
|---|-----------------|---|
| SOURCE | | |
| DC Voltage [#] | 0.1mV to 100mV | 0.48% to 0.0015% |
| 0 | 100mV to 10V | 0.0015% to 0.0004% |
| | 10V to 1000V | 0.0004% to 0.0009% |
| AC Voltage [#] | 10 Hz | |
| 5 | 1mV to 2mV | 0.49% to 0.28% |
| | 2mV to 20mV | 0.28% to 0.054% |
| | 20mV to 200V | 0.054% to 0.033% |
| | 50Hz to 20kHz | |
| | 1mV to 2mV | 0.48% to 0.26% |
| | 2mV to 20mV | 0.26% to 0.034% |
| | 20mV to 200mV | 0.034% to 0.016% |
| | 200mV to 200V | 0.016% to 0.009% |
| | 20kHz to 100kHz | |
| | 1mV to 20mV | 0.48% to 0.091% |
| | 20mV to 200mV | 0.091% to 0.064% |
| | 200mV to 20V | 0.064% to 0.016% |
| | 50Hz to 1kHz | |
| | 200V to 1000V | 0.009% |
| DC Current [#] | 10µA to 20µA | 0.074% to 0.041% |
| | 20µA to 200µA | 0.041% to 0.008% |
| | 200µA to 20mA | 0.008% to 0.0045% |
| | 20mA to 2A | 0.0045% to 0.015% |
| | 2A to 100A | 0.015% to 0.03% |
| | 100A to 1000A | 0.32% |



| AC Current [#] | 10Hz | |
|-------------------------------|-----------------------------|---------------------|
| AC Current | 10μ2 10μA to 100μA | 0.21% to 0.069% |
| | 100μΑ to 200μΑ | 0.069% to 0.039% |
| | 200µA to 200µA | 0.039% to 0.032% |
| | 40Hz to 1kHz | 0.03978100.03278 |
| | | 0.11% to 0.026% |
| | 10μA to 100μA | |
| | 100µA to 200µA | 0.026% to 0.019% |
| | 200µA to 200mA | 0.019% to 0.016% |
| | 200mA to 2A | 0.016% to 0.038% |
| | 10kHz | 0.00/ |
| | 100µA to 200mA | 0.2% to 0.13% |
| | 200mA to 2A | 0.13% to 0.82% |
| | 10Hz to 50Hz | |
| | 2A to 120A | 0.084% to 0.066% |
| | 50Hz to 1 kHz | |
| | 2A to 120A | 0.084% to 0.194% |
| | 50Hz | |
| | 100 A to 1000 A | 0.330% |
| Resistance [#] | 1 mΩ | 0.03% |
| | 10 mΩ | 0.003% |
| | 100 mΩ | 0.0007% |
| | 1 Ω | 0.0004% |
| | 10 Ω | 0.0004% |
| | 100 Ω | 0.0004% |
| | 1 kΩ | 0.0003% |
| Resistance [#] | 100 kΩ | 0.0003% |
| Resistance | 1 MΩ | 0.0003% |
| | $1 \text{ G}\Omega$ | 0.007% |
| | $100m\Omega$ to 1Ω | 1.16% to 0.12% |
| | 1Ω to 10Ω | 0.012% to 0.003% |
| | 10Ω to $10k\Omega$ | 0.003% to 0.0011% |
| | $10k\Omega$ to $10M\Omega$ | 0.0011% to 0.005% |
| | $10M\Omega$ to $100M\Omega$ | 0.005% to 0.013% |
| | $100M\Omega$ to $1G\Omega$ | 0.013% to 1.8% |
| | | |
| F # | $1G\Omega$ to $1T\Omega$ | 1.8% to 5.8% |
| Frequency [#] | 10Hz to 500MHz | 0.00058% to 0.0003% |
| Time Period [#] | 0.1s to 2ns | 0.00058% to 0.0003% |
| Capacitance [#] | 1kHz | |
| | 1nF to 1 μF | 1.73% to 0.41% |
| | 50 Hz | |
| | 1 μF to 1mF | 0.64% to 0.67% |
| | (a) 1 kHz | |
| | 1 nF | 0.14% |
| | 10 nF | 0.07% |
| | 100 nF | 0.06% |
| | 1 μF | 0.06% |
| | 10 μF | 0.06% |
| | 100 μF | 0.09% |
| | 1 mF | 0.5% |
| | 10 mF | 0.5% |
| X | | |
| Inductance [#] | @ 1 kHz | 2.31% to 1.85% |
| | 100µH to 10mH | 1.85% to 0.93% |
| | 10mH to 10H | |
| Temperature Simulation Method | | |
| (Indicator Controller/ | | |
| | | |



| Recorder) [#] | | |
|--|----------------------|--------------------|
| Input RTD (PT-100) | -200°C to 800°C | 0.005°C to 0.04°C |
| Thermocouple | | |
| K - Type | -200°C to 1370°C | 0.035°C to 0.030°C |
| J – Type | -200°C to 1200°C | 0.026°C to 0.020°C |
| улурс N-Туре | -200°C to 1300°C | 0.050°C to 0.027°C |
| Е-Туре | -250°C to 1000°C | 0.33°C to 0.017°C |
| Т-Туре | -250°C to 400°C | 0.08°C to 0.013°C |
| R-Турс | -50°C to 1768°C | 0.13°C to 0.06°C |
| S-Type | -50°C to 1768°C | 0.12°C to 0.06°C |
| В-Туре | 600°C to 1800°C | 0.08°C to 0.05°C |
| B-Type | 000 C 10 1800 C | 0.08 C 10 0.05 C |
| AC POWER | @ 50Hz | 0.21% |
| (1 phase) [#] | 120V to 240V | |
| (i phuse) | 0.01A to 20A | |
| | 1.2W to 4.8kW | |
| | 120V to 240V | 0.29% |
| (a) UPF | 0.1A to 20A | |
| w orr | 9.6W to 3.8kW | |
| | 9.0 W 10 9.0KW | |
| AC POWER | 120V to 240V | |
| @0.8 PF | 0.1A to 20A | 0.41% |
| @ | 6W to 2.4kW | |
| @0.5 PF | 120V to 240V | |
| 0 | 0.1A to 20A | 1.2% |
| @0.2 PF | 2.4W to 960W | |
| Power Factor [#] | @ 50Hz | |
| | 0.2PF to UPF | 0.002PF |
| | (Lead/Lag) | |
| Oscilloscope [#] | 1MΩ output | 0.55% to 0.07% |
| F | 10mV to 130V | |
| DC Amplitude | $1M\Omega$ output | |
| - • · · · · · · · · · · | (a) 1kHz (V p-p) | 0.58% to 0.14% |
| | 10mV p-p to 130V p-p | |
| AC Amplitude | 2ns to 10ms | 0.03% to 0.06% |
| Time Base | 10ms to 5s | 0.06% to 0.6% |
| Bandwidth | 50 kHz to 600 MHz | 2.3% to 7% |
| Transformer Turns Ratio Meter [#] | 0.8 to 2000 | 0.06 |
| · · · · · | MEASURE | 1 |
| DC Voltage [#] | 10µV to 100µV | 0.7% to 0.07% |
| 8 | $100\mu V$ to $10mV$ | 0.07% to 0.0008% |
| | 10mV to 100V | 0.0003% to 0.0002% |
| | 100V to 1000V | 0.0003% to 0.0002% |
| DC High Voltage* | 1kV to 10kV | 2.54% to 2.45% |



| AC Voltage [#] | 10Hz to 10kHz | |
|---------------------------------|---|--------------------|
| | 1mV | 0.48 to 0.26 |
| | 10Hz to 1kHz | |
| | 2mV to 20V | 0.039% to 0.0018% |
| | 20V to 200V | 0.0018% to 0.0037% |
| | 200V to 1000V | 0.0037% to 0.0061% |
| | 1kHz to 100kHz | |
| | 2mV to 200V | 0.072% to 0.0024% |
| | 200V to 1000V | 0.0024% to 0.0029% |
| | 1kHz to 300kHz | 0.0025% to 0.0027% |
| | 20V to 60V | |
| AC High Voltage* | 100kHz to 1MHz | 0.072% to 0.0043% |
| | 2mV to 20V | |
| | 50Hz | |
| | 1kV to 10kV | 6.16% |
| DC Current [#] | 10µA to 100mA | 0.002% to 0.0009% |
| | 100mA to 1A | 0.0009% to 0.0023% |
| | 1A to 20A | 0.0023% to 0.0029% |
| | 20A to 100A | 0.0029% to 0.9% |
| AC Current [#] | 10Hz to 1kHz | 0.3% to 0.07% |
| | $10\mu A$ to $1mA$ | |
| | 10Hz to 10kHz | 0.026% to 0.015% |
| | 1mA to 20A | |
| | 50Hz | |
| | 10A to 100A | 0.1% to 0.18% |
| DC Resistance [#] | $1 \mathrm{m}\Omega$ to $10 \mathrm{m}\Omega$ | 0.5% to 0.06% |
| | $10 \text{ m}\Omega$ to $100 \text{ m}\Omega$ | 0.06% to 0.007% |
| | $100 \mathrm{m}\Omega$ to 1Ω | 0.007% to 0.0025% |
| | 1Ω to 10Ω | 0.0025% to 0.0013% |
| | 10Ω to $100M\Omega$ | 0.0013% to 0.026% |
| | 100 M Ω to 1 G Ω | 0.026% to 0.3% |
| | 1 G Ω to 10 G Ω | 0.3% |
| | $10 \text{ G}\Omega$ to $1 \text{ T}\Omega$ | 0.3% to 0.5% |
| AC Resistance [#] | @ 1kHz | |
| | 0.1Ω to 1Ω | 0.4% to 0.06% |
| | 1Ω to $100k\Omega$ | 0.06 % to 0.024% |
| | 100 kΩ to 1 MΩ | 0.024% to 0.07% |
| Frequency / Period [#] | 10Hz to 2GHz | 0.00011% |
| Capacitance [#] | @ 100 Hz | 0.000 |
| | 1 mF to $10 mF$ | 0.06% |
| | (a) 1kHz | 0.010/ / 0.040/ |
| | 10pF to 100pF | 0.21% to 0.04% |
| | 100pF to 10μ F | 0.04% to 0.025% |
| | $10\mu F$ to $100\mu F$ | 0.025 to 0.05% |
| T J 4 # | 100µF to 10 mF | 0.05% to 0.02% |
| Inductance [#] | @ 1kHz 100μH to 10H | 0.1% to 0.032% |
| DC Power [#] | 1V to 1000V | |
| | 100mA to 20A | |
| | 100 mW to 20 KW | 0.37% to 0.26% |
| C POWER | | |
| | | |
| (1 phase) [#] | @ 50Hz | |



| | | 0.460/0.20/ |
|---|---|---|
| | 100 mA to 20A | 0.46% to 0.2% |
| | 100 mW to 12 kW | |
| | 1V to 600V | |
| \bigcirc | 100 mA to 20A | 0.500/ . 1.00/ |
| | 80 mW to 9.6 kW | 0.56% to 1.6% |
| <u> </u> | 1V to 600V | |
| | 100 mA to 20A | |
| | 50 mW to 6 kW | 0.56% to 1.6% |
| | 1V to 600V | |
| | 100 mA to 20A | |
| | 20 mW to 2.4 kW | 0.56% to 1.6% |
| | UPF to 0.2 PF | 0.0015 PF |
| | 0 to 360° | |
| | (Lead/Lag) | 0.026° |
| | @ 50 Hz | |
| | UPF | 0.23 |
| | 240 V/ 5mA to 100A | |
| - | 6s to 30min | 0.15s to 0.6s |
| | 30min to 24Hrs | 0.6s to 4.0s |
| Temperature Simulation Method | | |
| (Indicator Controller/ | | |
| Recorder) [#] | | |
| Input RTD (PT-100) | -200°C to 800°C | 0.005°C to 0.018°C |
| | | |
| Parameter / Measured Quantity / | | Calibration Measurement |
| Device Under Calibration | Range | Capability (±) (CMC) |
| Thermocouple | | Capability (1) (Civic) |
| - | -200°C to 1370°C | 0.010°C to 0.020°C |
| | -200°C to 1200°C | 0.016°C to 0.018°C |
| | -200°C to 1200°C | 0.013°C to 0.020°C |
| | | |
| v 1 | | |
| E-Type | -250°C to 1000°C | 0.013°C to 0.010°C |
| E-Type T-Type | -250°C to 1000°C -250°C to 400°C | 0.013°C to 0.010°C 0.015°C to 0.020°C |
| E-Type T-Type R-Type | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C |
| E-Type T-Type R-Type S-Type | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C |
| E-Type T-Type R-Type S-Type B-Type | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C |
| E-Type T-Type R-Type S-Type B-Type <u>Mass & Volume:</u> | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C |
| E-Type T-Type R-Type S-Type B-Type | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Calibration Measurement 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 500 mg | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Calibration Measurement 0.003 mg 0.003 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0. |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 500 mg 1 g 2 g | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.004 mg 0.005 mg 0.007 mg |
| E-Type T-Type R-Type S-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 50 mg 1 g 2 g 5 g | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg |
| E-Type T-Type R-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 50 mg 1 g 2 g 5 g 10 g | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg 0.005 mg 0.007 mg 0.007 mg 0.007 mg 0.007 mg |
| E-Type T-Type R-Type S-Type B-Type Mass & Volume: Parameter / Measured Quantity / Device Under Calibration Weights [§] (Conventional Mass) | -250°C to 1000°C -250°C to 400°C -50°C to 1768°C 600°C to 1800°C Range 1 mg 2 mg 5 mg 10 mg 20 mg 50 mg 100 mg 200 mg 50 mg 1 g 2 g 5 g | 0.013°C to 0.010°C 0.015°C to 0.020°C 0.02°C to 0.06°C 0.02°C to 0.06°C Calibration Measurement Capability (±) (CMC) 0.003 mg 0.003 mg |



| 200 - | |
|-----------------------------|---|
| 200 g | 0.05 mg |
| 500 g | 0.001 g |
| 1 kg | 0.001 g |
| 2 kg | 0.03 g |
| 5 kg | 0.03 g |
| 10 kg | 0.10 g |
| 20 kg | 0.10 g |
| | |
| (0 to 5 g) d = 0.001 mg | 0.007 mg |
| | 0.04 mg |
| | 2.62 mg |
| | 15 mg |
| | 81 mg |
| | 54 g |
| | 0.006 μl |
| | 0.06 μl |
| | 0.070 μl |
| | 0.040 μl |
| | 0.040 μ1 |
| | 0.040 μι |
| 10 | 6.300 μl |
| - • | 0.500 μ1 |
| | 1.095 μl |
| 100 111 | 6.000 μl |
| 200 III | |
| Range | Calibration Measurement |
| | Capability (±) (CMC) |
| | |
| | 0.006 ml |
| | 0.01 ml |
| 2000 ml | 0.10 ml |
| | |
| | 1 kg 2 kg 5 kg 10 kg 20 kg $(0 \text{ to 5 g) d = 0.001 \text{ mg}}$ $(0 \text{ to 200 g) d = 0.01 \text{ mg}}$ $(0 \text{ to 200 g) d = 1 \text{ mg}}$ $(0 \text{ to 1 kg) d = 1 \text{ mg}}$ $(0 \text{ to 5 kg) d = 100 \text{ mg}}$ $(0 \text{ to 20 kg) d = 50 \text{ g}}$ $0.5 \mu \leq V \leq 50 \mu \text{ l}$ $50 \mu \leq V \leq 10000 \mu \text{ l}$ 1 ml 2 ml 5 ml 10 ml 200 ml 100 ml 200 ml 600 ml 000 ml |

| Dimension: | | | |
|---|---|---|--|
| Parameter / Measured Quantity / Device Under Calibration | Range | Calibration Measurement Capability (±) (CMC) | |
| Caliper [§] | Upto 600 mm | 15 μm | |
| (Vernier/Dial/Digital) L.C.0.01mm | Upto 1000 mm | 22 μm | |
| Depth Caliper [§] (Vernier/Dial/Digital) L.C.0.01mm | Upto 300 mm | 9.1µm | |
| Height Gauge [§] (Vernier/Dial/Digital) L.C.0.02mm | Upto 600 mm | 20 µm | |
| External Micrometer ^{\$} (Traverse) | Upto 100 mm | 3 μm | |
| L.C. 0.001 mm | >100 - 300 mm | 8 μm | |
| L.C. 0.01mm | >300 - 700 mm | 10 μm | |
| Internal Micrometer ^{\$} (Stick Type) | 12 mm to 25 mm | 6.2 μm | |
| Head | 25 mm to 300 mm | 8.1 µm | |
| L.C. 0.01mm | 300 mm to 500 mm | 11.0 μm | |
| Depth Micrometer ^{\$} (Traverse) L.C.0.01mm Extension | Upto 100 mm 100 mm to 300 mm >275 to 700 mm | 6.3 μm | |
| Setting Rod / Extension Rod [§] | 25 mm to 125 mm | 1.6 μm | |
| Setting Rod / Extension Rod | >150 mm to 275 mm | 3.3 μm | |
| Dial Gauge ^{\$} (Plunger Type) L.C.0.001 mm | 0 - 50 mm | 1.1 μm | |
| Dial Gauge [§] (Lever Type) L.C.0.001 mm | 0 - 1 mm | 1 μm | |



| Bore Gauge ^{\$} (Transmission | 0.2 | 2.4 |
|---|---|---|
| Movement Only) | 0 - 2 mm | 2.4 μm |
| Dial Thickness Gauge ^{\$} | 0 to 50 mm | 7.0 μm |
| L.C. 0.001 mm | 0 to 50 mm | 7.0 µm |
| Feeler Gauge ^{\$} | 0.05 mm to 1 mm | 3.1 µm |
| Standard Foils ^{\$} | 0.05 mm to 5 mm | 4.5 μm |
| Measuring Scale\$(L.C.0.1µm) | Upto 1000 mm | 290 μm |
| Measuring Tape\$ (L.C.0.1µm) | Upto 50000 mm | 580 √L μm (L in mtr) |
| Cylindrical Measuring Pins\$ | 0.1 to 20 mm | 1.0 μm |
| Cylindrical Setting Master\$ | 3 mm to 100 mm | 1.6 μm |
| Snon Course / Con Courses | 3 to 50 mm | 1.8 μm |
| Snap Gauge / Gap Gauge\$ | 50 mm to 160 mm | 2.5 μm |
| Plain Plug Gauge / | 3 mm to 100 mm | 1.3 μm |
| OD Gauge\$ | 100 mm to 300 mm | 4.9 μm |
| Plain Ring Gauge / | 3 mm to 100 mm | '1.7µm |
| ID Gauge\$ | 100 mm to 300 mm | 4.4µm |
| Thread Plug Gauge\$ (Effective | 3 mm to 100 mm | '1.3 µm |
| Diameter) (Metric Thread Only) | 100 mm to 300 mm | 5.0 µm |
| Thread Ring Gauge\$ | Upto 100 mm | 1.7 μm |
| (Effective Diameter) | 100 mm to 200 mm | 3.0 μm |
| (Metric Thread Only) | 200 mm to 300 mm | 4.0 μm |
| Radius Gauge\$ | 0.4 mm to 25 mm | 12.2 μm |
| Thread Pitch Gauge\$ | 0.3 to 6 mm | 9.0µm |
| Thread Flich Gauges | $(55^{\circ} \text{ to } 60^{\circ})$ | 18' of arc |
| | | |
| Parameter / Measured Quantity / | Range | Calibration Measurement |
| Device Under Calibration | Range | Calibration Measurement Capability (±) (CMC) |
| Device Under Calibration Test Sieves ^{\$} (Aperature size / pitch) | Range 0.02 mm to 100 mm | Calibration Measurement Capability (±) (CMC) 11 μm |
| Device Under Calibration Test Sieves [§] (Aperature size / pitch) Wire Gauge [§] | Range 0.02 mm to 100 mm Upto 10 mm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1° | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§ | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm |
| Device Under Calibration Test Sieves [§] (Aperature size / pitch) Wire Gauge [§] Set Square Protractor [§] L.C.1° Taper Scale [§] Weld Gauge [§] | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle) | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle) | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle)Bevel Protractor§Profile Projector#(At Lab and At Site) | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle)Bevel Protractor§Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm) | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle)Bevel Protractor§Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1") | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc |
| Device Under CalibrationTest Sieves§(Aperature size / pitch)Wire Gauge§Set Square Protractor§ L.C.1°Taper Scale§Weld Gauge§(Scale/Depth/Angle)Bevel Protractor§Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm) | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICS | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 10x,20x,50x | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.6% |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] TORQUE | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 1kHz 74dB to 114dB | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.6% |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 10x,20x,50x 10 to 100 Nm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.6% |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] TORQUE | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 1kHz 74dB to 114dB | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.6% |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] TORQUE | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 10x,20x,50x 10 to 100 Nm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.7dB 1.9 % |
| Device Under CalibrationTest Sieves [§] (Aperature size / pitch)Wire Gauge [§] Set Square Protractor [§] L.C.1°Taper Scale [§] Weld Gauge [§] (Scale/Depth/Angle)Bevel Protractor [§] Profile Projector#(At Lab and At Site)1) Linear (L.C. 0.001 mm)2) Angular (L.C. 1")3) MagnificationACOUSTICSSound Level Meter [§] TORQUE | Range 0.02 mm to 100 mm Upto 10 mm 0 to 360° 0 to 100 mm Upto 50 mm Upto 60° 0 to 360° Upto 300 mm Upto 360° 10x,20x,50x 10 to 100 Nm 100 to 300 Nm | Calibration Measurement Capability (±) (CMC) 11 μm 9 μm 3.6' 10 μm 116 μm 6',20" 5' of arc 3.5μm 70.24" of arc 0.6% 0.7dB 1.9 % 1.86 % |

| Thermal Sco |
|--------------------|
|--------------------|

| Parameter / Measured Quantity / Device Under Calibration | Range | Calibration Measurement Capability (±) (CMC) |
|---|-----------------|---|
| Glass /Dial Thermometer ^{\$} | -80 °C to 250°C | 0.06°C |
| RTD/PRT/ Thermocouple Sensor with | -90 °C to -80°C | 0. 062 °C |
| or without Indicator, Digital | -80 °C to 0 °C | 0. 016 °C |
| Thermometers, Temperature | | |
| Transmitter with Sensor, Recorder | | |



| | | 0.010.00 | | |
|---|--------------------------------------|------------------------------------|--|--|
| with Sensor, Thermistor With | 0 °C to 250 °C | 0.018 °C | | |
| Temperature Indicator# | 250 °C +- (00 °C | 0.35 °C | | |
| RTD/PRT/ Thermocouple Sensor with | 250 °C to 600 °C | 0.35 °C | | |
| or without Indicator, Temperature, | | | | |
| Dial / Digital Thermometer, | | | | |
| Transmitter with sensor, Thermistor With Temperature Indicator# | | | | |
| | 600 °C to 800 °C | 1.2000 | | |
| Thermocouple with or without | 800 °C to 1200 °C | 1.26°C 1.45°C | | |
| Indicator, Temperature Transmitter with Sensor, Thermistor With | 800 C 10 1200 C | 1.45 C | | |
| Temperature Indicator#. | | | | |
| Temperature Indicator With Sensor of | -80°C to 0°C | 0.26 °C | | |
| Deep Freezers, Oven, Chambers, | 0 °C to 250 °C | 0.20 °C 0.24 °C | | |
| Incubator, Oil Bath, Dry Well | 250 °C to 600 °C | 0.24 C 1.63°C | | |
| Cooling Cabinet, Muffle Furnace | 250 0 10 000 0 | 1.05 C | | |
| Temperature Indicator with Sensor | 600 °C to 800 °C | 1.76 °C | | |
| of Muffle Furnace, Dry Block | 800 °C to 1200 °C | 1.90°C | | |
| Calibrator, Furnace | 000 0 10 1200 0 | 1.90 C | | |
| Calibration of Deep Freezers, | -80 °C to 300 °C | 2.9 °C | | |
| Oven,Chamber, Baths, Dry Well, | | 2.9 0 | | |
| Cooling Cabinet, Environmental | | | | |
| Chamber, Cold Rooms, Storage | | | | |
| room& | | | | |
| | Specific Heat and Humidity | | | |
| Humidity Sensor with Indicator, | 10 % RH to 95 % RH @ 25 °C | 0.51 & RH | | |
| Humidity Transmitter with sensor, | 10 °C to 50 °C @ 50 % RH | 0.36°C | | |
| Hygrometers / Humidity Data Logger | | | | |
| with Sensor [#] | | | | |
| Humidity Indicator with Sensor of | 10 % RH to 95 % RH @ 25 °C | 0.5%RH | | |
| Humidity Calibrator/ Generator/ | _ | | | |
| Environmental Chamber* | | | | |
| Humidity Calibrator/ Generator/ | 10 % RH to 95 % RH @ 25 °C | 3%RH | | |
| Environmental Chamber* | | | | |
| Pressure Scope | | | | |
| Parameter / Measured Quantity / | Range | Calibration Measurement Capability | | |
| Device Under Calibration | | (±) (CMC) | | |
| Pressure-Pneumatic | -93 bar to 0 bar (g) | 0.020%rdg | | |
| Digital/Analogue Pressure Gauges, | 0 bar to 35 bar (g) | 0.010% rdg | | |
| Vacuum Gauges, Indicators, | 6 kPa to 60 kPa (g) | 7.2 Pa | | |
| Pressure Transmitter, Pressure | | | | |
| switch [§] | 11 () | 0.0110/1 | | |
| Pressure - Hydraulic Digital/ | 1 bar to 35 bar (g) | 0.011% rdg | | |
| Analogue Pressure Gauges, Pressure | 35 bar to 1200 bar (g) | 0.011% rdg | | |
| Indicators, Pressure Transmitter, | | | | |
| Pressure Switches [§] | 0.0(1 | 0.1(0/1- | | |
| Absolute Pressure Digital/ | 0.06 bar to 1.6 bar 1.6 bar to 35 | 0.16% rdg | | |
| Analogue Pressure Gauges, Vacuum Gauges, Vacuum Indicator, Pressure | bar (abs) | 0.021% rdg | | |
| Transmitter, Pressure Switches | | | | |
| Barometer [§] | | | | |
| Digital/Analogue Pressure Gauges, | 0 to 1 mbar (g) | 0.0025 mbar | | |
| Indicator, Manometer, Magnahelic | 0 to 1 mbar (g) 0 to 2.5 mbar (g) | 0.0025 mbar 0.026 mbar | | |
| Gauge, Differential Pressure | $\pm 6 \text{ mbar} (g)$ | 0.026 mbar 0.05 mbar | | |
| Transmitter, Pressure Switches# | \pm 0 mbar (g) 0 to 10 mbar (g) | 0.007 mbar | | |
| 11 another the transmitted in | 0 to 20 mbar (g) | 0.014 mbar | | |
| | | | | |



| | 0 to 200 mbar (g) | 0.133 mbar |
|---------------------------------------|-------------------------|-------------------|
| Digital / Analogue Vacuum Gauge / | -0.95 to 0 bar (g) | 0.0013 bar |
| Indicator, Vacuum Transmitter# | | |
| Pressure Pneumatic Digital Pressure / | 0 to 5 bar (g) | 0.002 bar |
| Analogue Pressure Gauge / Indicator, | 0 to 40 bar (g) | 0.0132 bar |
| Pressure Transmitter Pressure | | |
| Switches Instruments (Hydraulic)#s | | |
| Pressure Hydraulic Digital Pressure / | 0 to 400 bar (g) | 0.12 bar |
| Analogue Pressure Gauge / Indicator, | 200 to 2000 bar | Refer NC AVK # 03 |
| Pressure Transmitter Pressure | | |
| Switches Instruments# | | |
| Absolute Pressure Digital/ | 0.7 to 7 bar (abs) | Refer NC AVK # 04 |
| Analogue Pressure Gauges, Vacuum | 3.5 bar to 35 bar (abs) | 0.046 bar |
| Gauges, Vacuum Indicator, Pressure | | |
| Transmitter, Pressure Switches# | | |



List of Reference Standards-Calibration ELECTRO -TECHNICAL

| Make / Model | | Parameter/ Range/ | / featu | ares/ Best | Accurac | cy |
|--|-----------------|------------------------------------|---------|-------------------|------------------------------------|------|
| Multifunction | | DC Voltage : 0 to \pm | 1020 | / Accura | acy: ± 12 | |
| Calibrator | | ppm | | | | |
| Make : Fluke | (Heasand Usice) | AC Voltage : 1 mV | to 102 | 0V 10 Hz | to 500 kH | Hz. |
| Model : 5520A | | Sine Accuracy: ± 1 | | | 10 200 M | , |
| Wodel : 5520A | | DC Current : 0 to \pm | | | n ⊨ 100 m | |
| | | | | | | рш |
| | | AC Current : 29 mA | | | HZ to 30 | |
| | | kHz, Sine, Accuracy | | | | |
| | | Resistance :0 to 110 | 0 MΩ | , Accurac | $y: \pm 28$ | |
| | | ppm | | | | |
| | | Capacitance: 19 nF | to 110 | mF, Accu | iracy: | |
| | | ±0.25 % | | | | |
| | | Thermocouple Sour | ce and | l measure | : - 250°C | to |
| | | +2316°C Accuracy: | : ± (| 0.14 °C | | |
| | | RTD Source : -200° | | | ccuracy : | ± |
| | | 0.03C | | , | 2 | |
| | | DC Power: 10.9 mV | V to 20 |).5 kW A | ccuracy. | ± |
| | | 0.023 % | 20 | | | - |
| | | AC Power : 10.9 m | W to 2 | 05kW 4 | 5-65 Hz | |
| | | PF=1 | 102 | 0.5 K II, I | <i>J</i> =0 <i>J</i> 11 <i>L</i> , | |
| | | Accuracy: ±0.08% | of sott | ina | | |
| | | Scope Function: 600 | | | | |
| 8.5 Digit Reference Multimeter | | DC Voltage : 0 to ± 1 | | | | |
| Make : Fluke | | 6 | | • | , 11 | /TT_ |
| Model : 8508A | | AC Voltage : 2 mV | | J50 V, I I | 1Z to I IV | IHZ |
| Model . 8508A | | Accuracy: ±65 ppn | | | . 10 | |
| | | DC Current : 0 to ± 2 | | | | |
| | | AC Current : $2 \mu A$ | |) A, I Hz | to 100 k | кНz |
| | | Accuracy: ±250 pp | | - · | | |
| | | Resistance : $1m\Omega$ to | 20 G | Ω , Accura | $cy: \pm 8 pp$ | pm |
| | | | | | | |
| AC Measurement Standard | | ACV Measurement | | | 000V, 10 | Hz |
| Make : Fluke | | to 1 MHz, Accuracy | y:± 24 | ppm | | |
| Model : 5790A | | | | | | |
| | | | | | | |
| | | | | | | |
| Draginian A.C.C. | | Alterated | DC | 1 1.77 | 100 | |
| Precision AC Current Shunt $(1mA)/(10mA)/(500mA)/$ | | Absolute accuracy Shunt nominal | DC | 1 kHz | 100 kHz | |
| (1mA)/ (10mA)/ (500mA)/ (1A)/ (10A)/ (20A)/ | | | | | KHZ | |
| Make : Fluke | 100 m | Current: in \pm ppm | 20 | 55 | 150 | - |
| Model :A40B | ā v | 1 mA | 20 | 55 | 150 | - |
| | 1 | 10 mA | 20 | 26 | 26 | - |
| | | 500 mA | 21 | 27 | 28 | - |
| | | 1 A | 21 | 27 | 31 92 | - |
| | | 10 A | 26 | 37 | - | - |
| | | 20 A | 26 | 43 | 113 | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |



| Make / Model | | Parameter/ Range/ features/ specification |
|---|---|---|
| Phase Meter Make : Clarke-Hess Model :6000A | 285,025 ····· 2 ···· | Phase Ranges: 0° to 360° or ±180° user selectable Amplitude Range: 10mV to 630 Vrms Accuracy: 0.02° |
| Universal Power Analyzer Make : Voltech Model : PM6000 | | DC Voltage Range: 1 to 1000 V DC Current Range: 100 mA to 30 A AC Voltage Range: 1 to 700 V AC Current Range: 100 mA to 30 A Power Measurement Range: 100 mW to 30kW Accuracy: ±0.02 % rdg |
| Timer/ Counter/ Analyzer Make : Pendulum Model : CNT 90 bridge | | Range : 0.002Hz to 3GHz stability : 0.01ppm Resolution : 12digits |
| Standard Resistor, Make : Fluke Model :742A-1/ 742A-10/ 742A-100/ 742A-1k/ 742A-100k/ 742A-1M | ACA-IDA CONACT CONTRACT CLINICIA SELSE CLINICIA SEL | Stability: ± 8 ppm Accuracy: < 2.5 ppm |
| Precise Air Bath Make: Sakav | | |



| Make / Model | | Parameter/ R | ange/ fea | tures/ speci | fication |
|---|--|--|--|---|--|
| Multifunction Calibrator Make : Fluke Model : 5720A | | DC Voltage : AC Voltage : 45.0 ppm DC Current : AC Current : 10 Hz to 10 k Resistance :0 1.9 With best Acc | $0.22 \mu V$ 0 to $\pm 2.2A$ 9 μA to 2.2 Hz Accurat to 100 MS | & 1100V A Accuracy ± 2A cy ± 120.00 2, 18 values | accuracy ± 35 ppm |
| High Accuracy all-Purpose Decade Inductor Make: IET Model : 1491G | | Inductance per step 100 μH 1 mH 10 mH 100 mH 1 H | Accurac y ±2% ±1.6% ±0.8% ±0.8% | Test frequency 1000 Hz 1000 Hz 500 Hz 200 Hz 100 Hz | Test voltage 10 mV 10 mV 20 mV 20 mV 40 mV |
| High Stability Decade Megohm Box Make : Vaiseshika Model : 8400 HV | | Range : 0.1 MΩ Accuracy: +/- 2 TΩ, Stability : | % until 1 G : +/- 5% | iga ohm | a Ohm to 10 |
| Electrometer Make : Keithley Model : 6517B | XUINXX +1.0023e+15.0-cm R1:53 External Taxe*12.19C International Control Contron Control Control Control Control Contron Control C | Resistance Me Best accuracy: | | Range: 1Mg | α to 200ΤΩ, |
| AC and DC Current Source Make KEITHLEY Model :6221 | | Range: 1 nA to Best Accuracy: | | | |
| Ultra-Precise "Air" Resistance Standards Make: Guildline instruments limited Model : 9334A-0.001 Ω / 0.01 Ω / 0.1 Ω / 1G Ω | 9334A-0.001 REISTANCE STANDARD NOLINIAL RESISTANCE SOBO V MAXIMUM CONTACT SOBO V MAXIMO V MAXIMO SOBO V MAXIMO V MAXIMO V MAXIMO V MAXIMO V | Resistance Ran Accuracy: < 2 p | - | IGΩ | |
| Precision LCR Meter Make : IET Labs Model : GenRad 1693 | | | 0 μH to 10 I l Ω to 10 M | | |



| Make / Model | Parameter/ Range/ features/ specification |
|---|---|
| AC/DC Transfer Standard Make : Fluke Model :792A | Range: 2 mV to 1000V, 10 Hz to 1 MHz Accuracy: : ± 10ppm |
| Direct Voltage Standard Make : Fluke Model :732B | Output: 10V : ± 0.3 ppm, 1.018V: ± 0.8 ppm |
| High Accuracy Decade Capacitance Substituter Make: IET Model: Hacs-A-Z-A-10E-1pF | Range: 1 pF to 11,111 µF Accuracy: ± 0.05% + 0.5 pF Excellent Stability 100 ppm per year |
| 3 Phase Portable Reference standard Make : Zera Model : MT320 | Voltage measurement: 100 mV 300 V Current measurement: 1 mA12 A [5mA120 A] Accuracy: ± 0.05 % |
| Trans conductance Amplifier Make : Fluke Mode: 52120A | Output ranges: 2 A, 20 A, 120 A (100 A dc) Input current range: 200 mA, 200 mA, 120 mA (100 mA dc) Input voltage range: 2 V, 2 V, 1.2 V (1.0 V dc) AC accuracy \pm 140 ppm DC accuracy \pm 160 ppm |
| Reference Divider Make: Fluke Model: 752A | Division Ratio 10:1 ±0.2 ppm: Input: 0 V to 100V Division Ratio 100:1 ±0.5 ppm: Input: 0 V to 1000V Range 10: 0 Input Voltage: 0 to 100 V Output Uncertainty: 0.2 ppm Range 100: 1 Input Voltage: 0 to 1000V Output Uncertainty: 0.5 ppm |



| Make / Model | Parameter/ Range/ features/ specification |
|--|--|
| Automatic Instrument Transformer Test Set Model: AITTS – 98 Make: ELTEL | Measuring Ranges: : Ratio Error : 0 to $\pm 20\%$ Phase Error - 0 to ± 0.2 radians (20 crad) 0 to ± 680 minutes Accuracy CT Ratio Error : 0.6 of rdg ± 10 ppm Phase Error : 0.6 of rdg ± 10 µrad Accuracy VT Ratio Error : 0.6 % rdg ± 10 ppm Phase Error : 0.6 % rdg ± 10 µrad |
| Standard Current Transformer Make: ELTEL Model: 2509 | Range: 5 A to 6300 A/ 5 A Class: 0.005 |
| 6.5 Digit Precision Multimeter Make: Fluke Model: 8846 A | V DC Range: 100 mV to 1000 V Accuracy: 0.0024 + 0.0005 V AC Range: 100 mV to 1000 V Accuracy:0.06 + 0.03 |
| Multifunction Electrical Tester Calibrator Make: Fluke Model: 5320A | Low Resistance Ranges: 100 m Ω to 10 k Ω Specification: \pm 0.2 % of setting High Resistance Ranges: 10 k Ω to 100 G Ω Specification: \pm 0.2 % of setting |
| Turns Ratio Standard Make: Quadeant Model: QTRS-1 | Ratio Range: 0.8 to 2000 Test voltage: 110V Max Resolution: 0.01 at factor 1 Accuracy: 0.5% |



List of Reference Standards-Calibration THERMAL

| Make / Model | | Parameter/ Range/ features/ specification |
|---|--------|--|
| Deep Well Compact Baths Make : Fluke Model : 7381/ 6331 | | Range (6331) 35 °C to 300 °C Stability (6331) ± 0.007 °C at 100 °C (oil 5012) ± 0.010 °C at 200 °C (oil 5017) ± 0.015 °C at 300 °C (oil 5017) Uniformity(6331) ± 0.007 °C at 100 °C (oil 5012) ± 0.017 °C at 200 °C (oil 5017) ± 0.025 °C at 300 °C (oil 5017) Range (7381) -80 °C to 110 °C Stability Stability (7381) ± 0.006 °C at -80 °C (ethanol) ± 0.005 °C at 100 °C (oil 5012) Uniformity (7381) ± 0.007 °C at -80 °C (ethanol) ± 0.007 °C at -80 °C (oil 5012) |
| Ultra-Cool Field Metrology Well Make: Fluke Model: 9190A | F-LIKE | Temperature Range: -95 °C to 140 °C Stability: ± 0.015 °C full range Axial uniformity at 40 mm : ± 0.05 °C full range Radial uniformity : ± 0.01 °C full range |
| Thermocouple Furnace Make: Fluke Model: 9150 | | Temperature Range: 150 °C to 1200 °C Stability: ±0.5 °C Well-to-Well Uniformity: ±2.5 °C (Insert "C" at 1200 °C) |



| Make / Model | Parameter/ Range/ features/ specification |
|---|--|
| Humidity Calibrator Make: Michell Model: S904 | Humidity Generation Range: 10 - 95% RH Humidity Stability: ± 0.2% RH Temperature Generation Range: +10 to +50°C Temperature Stability: ±0.1°C |
| Secondary Reference PRT Make: Fluke Model: 5616 | Temperature range: -200 °C to 420 °C Excellent stability: ± 10 mK Accuracy: 0.011 °C |
| Handheld Thermometer Readout Make: Fluke Model: 1524 | PRT'S Range: - 200 °C to + 420 °C Accuracy: ± 0.011 °C Thermocouple range: - 200 °C to 2300°C Accuracy: ± 0.22 °C |
| High-Temperature Metal-Sheath SPRT Make: Fluke Model: 5699 | Temperature Range: -200 °C to 670 °C Drift rate: < 0.008 °C/year |
| Type R and Type S Thermocouple Standards Make: Fluke Model: 5650 | Range: 0 °C to 1450 °C Long-Term Stability: ± 0.5 °C to 1100 °C ± 2.0 °C to 1450 °C |



| Make / Model | Parameter/ Range/ features/ specification |
|--|---|
| Super-DAQ Precision Temperature Scanner Make: Fluke Model: 1586A | PRT/RTD Temperature Range: -200 °C to 1200 °C (depending on the sensor) Resistance Range: 0 Ω to 4 k Ω PRT/RTD Resistance Accuracy: 0.002 % PRT/RTD Temperature Accuracy: 0.002 °C to 0.2 °C in the range: - 200 °C to 600 °C. Thermocouple Range: - 270 °C to 2315 °C (depending on the sensor) Accuracy: \pm 0.20 °C |
| Precision Infrared Calibrators Make: Fluke Model: 4180/ 4181 | Temperature Range (@ 23 °C ambient, 0.95 emissivity): -15 °C to 120 °C (4180) 35 °C to 500 °C (4181) Stability: 4180 ± 0.10 °C at -15 °C ± 0.05 °C at 0 °C ± 0.10 °C at 120 °C 4181 ± 0.05 °C at 35 °C ± 0.20 °C at 200 °C ± 0.40 °C at 500 °C Uniformity (2.0 in dia of center of target)2 4180 ± 0.10 °C at -15 °C ± 0.10 °C at -15 °C ± 0.10 °C at 200 °C ± 0.10 °C at -15 °C ± 0.10 °C at -15 °C ± 0.10 °C at 200 °C ± 0.20 °C at 200 °C ± 0.20 °C at 200 °C |
| Series Graphic Recorder Make: Chino | PRT/RTD Range: - 200 °C to 600 °C Thermocouple Range: -270 °C to 2315 °C PRT/RTD input Accuracy: ± 0.3 °C Thermocouple input Accuracy: ± 0.5 °C |
| Versatile handheld indicator Make:Rotronic Model:HYGROPALM:HP22 -A with HC2-S Probe | Operating Range: -10 °C to 60 °C / 0 – 100 % RH Accuracy: 0.1 °C/ 0.8 % RH |



| Make / Model | | Parameter/ Range/ features/ specification |
|---|--------|--|
| Portable Calibration Bath Make: Fluke Model: 7109A | R-LIKE | Range: -25 °C to 140 °C, Stability: 0.01 °C, Uniformity: 0.02 °C |
| Ex "Stik" Thermometer Readout Make: Fluke Model: 1551A | | Range: -50 °C to 160 °C , Resolution: 0.001 °C Accuracy: ± 0.05 °C |
| Thermocouple Calibration Furnance Make: Fluke Model: 9118A | | Range: 300 °C to 1200 °C , Stability: ± 0.1 °C , Uniformity: ± 0.1 °C to ± 0.25 °C |
| Thermocouple Calibration Furnance Make: Fluke Model: 9142A | | Range: -25 °C to 150 °C, Stability: ± 0.01 °C, Uniformity: ± 0.05 °C |

List of Reference Standards-Calibration DIMENSION

| Make / Model | | Parameter/ Range/ features/ specification |
|---|------------------------|---|
| Universal Length Measuring Machines Make: Octagon Model: LMM 300 T | Ctopen Destribution | Range: upto 300 mm Accuracy: ±0.7 μm |



| Make / Model | Parameter/ Range/ features/ specification |
|---|---|
| Measuring Scale & Tape Calibration Systems Make: Octagon Model: MSTC 1000 | Measuring Range - Absolute: 1000 mm Accuracy: ± (10 ± L/100) μm |
| Slip Gauge Set Make: Mikronix Model: M121/1, M88/1, M10, M8 | Range: 0.5 mm to 500 mm Accuracy: As per ISO/FDIS 3650 : 1998 (E) |
| Caliper Checker Make: Aditya Model: CC3-1000 | Range: 0 to 1000 mm Accuracy: 0.010 mm |
| Profile Projector Make: Mitutoyo Model: PJ-A3000 | Range: 200 x 100 mm XY Stage, Magnification: 10 X , 20 X & 50 X , Magnification Accuracy: ± 0.1 % |
| Angle Gauge Set Make: Micronix Model: 2208 | Range: 1' to 90 ⁰ Accuracy: As per ISO/FDIS 3650 : 1998 (E) |



List of Reference Standards-Calibration TORQUE

| Make / Model | | Parameter/ Range/ features/ specification |
|---|--|---|
| Electronic Torque Wrench Tester Calibrator Make: Kudale | | Measuring Range : 0-100 N-m, 0-300 N-m & 0 – 1000 N-m Accuracy: ± 1 % |

List of Reference Standards-Calibration SPEED

| Make / Model | | Parameter/ Range/ features/ Specification |
|--|---|--|
| Pocket Laser Tech Make: Monarch Model: PLT 200 | | Range(s): Optical: 5 to 200,000 RPM Accuracy::Optical:±0.01% of reading Contact:±0.05% of reading (rpm |
| Tachometer Calibrator Make: Zeal Model:ZSDTC | TALL OF THE CALIBRATOR OF THE | Range:1 rpm to 1 Lac rpm Accuracy: 0.01% |

List of Reference Standards-Calibration VOLUME

| Make / Model | Parameter/ Range/ features/ Specification |
|--------------------------|---|
| Digital Weighing Balance | Capacity: |
| Make: Shimadzu | 0 to 220g (Model: AUW 220D) |
| Model: AUW 220D, | 0 to 6200g(Model: UX 6200H) |
| Model: UX 6200H | 0 to 22 kg (Model: BX 22KH) |
| Model: BX 22KH | Accuracy: Class I |
| | |



List of Reference Standards-Calibration ACOUSTIC

| Make / Model | | Parameter/ Range/ features/ Specification |
|---|---|--|
| Sound Level Calibrator Make: Gen Rad Model:1986 | 0 | Range: 74 dB, 84 dB, 94 dB, 104 db & 114 dB @ 1 KHz Accuracy: ± 0.5 dB |

List of Reference Standards-Calibration PRESSURE

| Make / Model | | Parameter/ Range/ features/ Specification |
|--|-------------------|--|
| Pressure Controller/Calibrator Make: Fluke Model: PPC4 | | Range: -1 bar to 0 barG, 0 to 16. barG, 0.06 bar 1.6 bar Abs. Accuracy: ± 0.008 % rdg or ±0.0024 %FS (whichever is greater) |
| Hydraulic Deadweight Testers Make: Fluke Model: P312 XT-BAR | | Range: 1 bar to 35 bar Accuracy: ± (0.008 % Rdg or 0.0008% FS) Range: 20 bar to 1200 bar Accuracy: ± (0.008 % Rdg or 0.0004 % FS) |
| Reference Pressure Monitor Make: Fluke Model: RPM4 A200Ms-L | 14.0280 Psi a zHi | Range: 0 to 2000 bar Accuracy: ±(0.005 % rdg or 0.0015 % FS, whichever is greater) |

List of Reference Standards-Calibration FORCE

| Make / Model | Parameter/ Range/ features/ Specification |
|--|---|
| Uni-axial Testing Machine Make: FIE Model: UTN60 | Accuracy: ± 1 % Capacity: up to 600kn |



List of Reference Standards-Calibration MASS

| Make / Model | Parameter/ Range/ features/ Specification |
|---|---|
| Analytical weights Make: Austenitic S. S. Laboratory Weights Make: Weigh India | Range: 1 mg to 200 g Accuracy: Class E1 & E2 Range: 500 g to 20 kg Accuracy: Class F1 Range: 500 g to 20 kg Accuracy: Class E2 ID No.:WI/11/2014/010-E1 |
| Digital Weighing Balance (Semi Micro) Make: Radwag Model: XA 210.4Y | Range: 0 to 210 g Accuracy: Class I ID No.:ACT/STD/184 |
| Digital Weighing Balance (Micro) Make: Radwag Model: MYA5.4Y | Range: 0 to 5 g Accuracy: Class I ID No.:ACT/STD/183 |
| Digital Weighing Balance Make: Radwag Model: PS 1000.R2 | Range: 0 to 1000 g Accuracy: Class II ID No.:ACT/STD/185 |



List of Reference Standards-Calibration FLOW

| Make / Model | Parameter/ Range/ features/ Specification |
|---|--|
| Gas Flow Standard meters & Controllers Make: Alicat Scientific Model: M series | Range: 0 to 5 SCCM 0 to 50 SCCM 0 to 500 SCCM 0 to 1 SLM 0 to 500 SLM 0 to 500 SLM 0 to 500 SLM 0 to 4000 SLM Accuracy: $\pm 0.4 \% + 0.2 \%$ FS Suitable for 27 no's Gases Standard media used for calibration N2 or Air |
| Portable Ultrasonic Flow Meter, Make: GE Model: Trans Port PT878 | Range: 0 to 500 m3/hr Accuracy: ± 0.5 % Rdg Clamp-on Pipe Transducer suitable for 1/2"to 24"pipe portable liquid flowmeter is a complete portable ultrasonic flow metering system for measurement of: Potable water, Wastewater, Cooling and heating water, Ultrapure water and liquids, Water/glycol solutions, Crude oil, Refined hydrocarbons, Diesel and fuel oils, Lubricating oils, Chemicals, Beverages, Other liquids |



MAJOR PRODUCTS CALIBRATED/ CALIBRATION DONE

ELECTRO - TECHNICAL

Multifunction Calibrators , DC Voltage Reference Standards, 6 ½, 71/2, 8½ Digit Digital Multimeters, HV Testers/ Probes/ Meters, Power/Energy Calibrators, Power Analyzers, Power Quality meters, Watt hour meters, Signal Generators, Frequency Standards, Frequency Counters, Resistance Standards/ Decade, Capacitance/ Inductance Standards, LCR Meters & Bridges, Insulation testers, High Mega ohm meters, AC/DC shunts, Rogoswi coils/ Current transducers, Ammeter, Voltmeter, Temperature Indicator/Controller (By Electrical Simulation), Process Calibrators, Hipot Testers, Battery Testers, Clamp on meters, Medical safety Testers, High Voltage Breakdown testers, HV Probes, Impendence Resistance Testers, Oscilloscopes, Memory Recorders, ECG Simulators, Tachometers, Timer, Stop watch, Time totalizers, Scope Calibrators, V, I & R Calibrator, Loop Calibrator, Earth testers, RCD Testers, Leakage Current testers, Current Transformers, Voltage Transformers, CT Burdens, PT Burdens, 1 ph/3 ph Energy meters.

THERMAL

Temp. Sensors (RTDS/TC/Thermistors), Temperature transmitters, Temperature Recorders, Indicators, Baths, furnaces, Environmental chambers, ovens, deep freezers, incubators, controllers, gauges, walk-in chambers, refrigerators, glass Thermometers data loggers, data acquisition systems, scanners etc., Humidity sensors with or without indicators, Humidity Generator/ Chamber/Calibrators, Temperature Transmeters, humidity Transmeters

PRESSURE

Pressure Dial/Digital gauges & Calibrators, Manometers, Magnelic Gauges, Low pressure calibrators, Transmitters, pressure switches, Pressure recorders etc.(Hydraulic & Pneumatic)

SPEED

Tachometers (Contact Type/Non-Contact type), Stroboscope, Centrifuge machine

ACOUSTICS

Sound level meters, Microphones

TORQUE

Torque wrenches, Torque Screw Drivers

MASS

Weighing Scale, Weighing Balance, Spring Balance, Fractional weights, Weights

VOLUME

Micro-pipettes, Pipettes, Burette, Glassware's, Beakers, Cylinders, Jars etc

FLOW

Liquid Flow meters, Gas flow meters

DIMENSION

Caliper (Vernier/ Dial/ Digital), Depth Caliper (Vernier/ Dial/ Digital), Height Gauge (Vernier/ Dial/ Digital), External Micrometer (Stick Type) Micrometer Head, Internal Micrometer (Stick Type) Head, Depth Micrometer, Setting Rod/ Extension Rod, Dial Gauge (Plunger Type), Dial Gauge (Lever Type), Bore Gauge (Transmission Movement Only), Dial Thickness Gauge, Dial Caliper (External Measurement), Dial Caliper (Internal Measurement), Feelar Gauge, Standard Foils, Measuring Scale, Measuring Tape, Cylindrical Measuring Pins, Cylindrical Setting Master, Snap Gauge/ Gap Gauge, Plain Plug Gauge/ OD Gauge, Plain Ring Gauge/ OD Gauge, Thread Plug Gauge/ (Effective Diameter) (Metric Thread Only), Thread Plug Gauge/ (Effective Diameter) (Metric Thread Only), Push – Pull Gauge, 3-point micrometers, Slip gauge sets etc

FORCE

Force Measuring Instruments, Force Transducers, Proving rings, Load Cells, Push-Pull Meters, Force Gayes

ABOUT VALIDATION

About Validation

Through its Equipment & Process Validation Group, AUTOCAL executes and manages projects ranging from validation of stand-alone automated equipment and systems to start-up, commissioning and validation of new facilities.



The Challenge

Changing regulatory expectations coupled with new technologies, new equipment, and new products all lead to short-term workloads that can easily exceed your current resources. Comprehensive regulatory knowledge, in-depth understanding of process & equipment are vital for development of practical and cost-effective validation strategy. A business partner with this level of expertise, as well as the ability to employ proven, systematic approaches is critical for ensuring the success of the business initiatives you undertake.

The Solution

Whether your business is biotechnology, pharmaceuticals, aseptic manufacturing or solid dosage forms, AUTOCAL has the expertise & resources to help you define and achieve sustainable results. Our teams have extensive experience with utilities (BMS, HVAC systems), sterile manufacturing processes and change control. Our equipment validation experience includes packaging equipment such as blister formers, tablet fillers & labelers, manufacturing equipment such as biotechnology equipment such as bioreactors and lyophilizes.

Implementing Sound Strategies

AUTOCAL believes that a successful facility startup requires significant input from client-engineering, process, manufacturing and validation personnel. Our teams are accustomed to asking the right questions up front knowing that it is much more efficient to create and approve specifications without making changes during construction that will increase costs, introduce time delays and cause revision or repetition of validation activities. AUTOCAL develops and implements sound validation strategies and rationale prior to the start of formal validation activities, providing the highest level of assurance that systems and equipment meet required specifications. This approach is one way AUTOCAL helps reduce overall project costs.

AUTOCAL provides contract services, as do other firms, to the industry. We differentiate ourselves in several ways from our competition. We provide a team of professionals who have worked in the industry and all have hands-on experience with validation activity. We build partnerships and prioritize teamwork too efficiently and cost effectively provide benefit to your company. We want a win-win result in every business relationship. We are a dedicated validation group offering greater experience than is available from our competitors and offer superior service. Our strengths have been our relationships with customers, the dedication of our employees and our expertise in the field of validation technology. We believe that the combination of our resources and expertise with your internal capabilities is the most effective approach to economical solutions.



Welcome to the Validation Services at AUTOCAL. We specialize in providing our customers in the Pharmaceutical, Biotechnology, and Medical Devices industries with cGMP validation services. We provide validation services for Equipment's, Computer, Facility, HVAC and more. We are aligned with our customer's compliance and validation needs.

Our primary area of service is fulfilling validation, regulatory and compliance services from stand-alone automated equipment to start-up, commissioning & validation of new facilities, AUTOCAL achieves results through a comprehensive portfolio of services:

•Calibration: auditing established programs for compliance and development of new Programs;

- •Development and execution of master plans;
- •Development of guidelines and standard operating procedures;
- •Development of User Requirements, Functional Requirements and design specifications;
- •Factory and site acceptance testing and vendor audits;
- •Installation, operational and performance qualification protocol development and execution;
- •Cleaning validation: bulk actives, pharmaceuticals and biological;
- •Change control design, implementation and administration;
- •Preparation of regulatory submissions technical summaries and documents;
- •Revalidation and process improvement activities;
- •Audits of internal/external cGMP compliance;
- •Compliance gap assessments

Our department offers a full range of Validation Services such as:

- •Equipment Validation
- •PLC Validation
- •HVAC Validation
- •HVAC validation

•Compressed Air Line Validation



EQUIPMENT VALIDATION

Equipment Validation ensures that an instrument is appropriate for its intended use. Typical validation phases are:

- Design Qualification (DQ) for setting up the functional and performance specification
- Installation qualification (IQ) for performing and documenting the installation in the selected user environments.
- Operational qualification (OQ) for testing the equipment in the selected user environment to ensure that it meets the previously defined functional and performance specifications.
- Performance qualifications (PQ) for testing that the system consistently performs as intended for the selected application.
- Revalidation & Temperature Mapping
- Temperature Distribution Study.

AUTOCAL is well equipped with More Than 3000 Wireless data Logger for area Mapping, 24 wired loggers and more than five hundred sensors to provide temperature mapping services for the following:

Sterilizers:

Autoclaves, Dry Heat Sterilizers, EO Sterilizers Tunnel.





Stability Study:

Humidity chambers, Walk In chambers, Ware House and rooms.

Equipment's:

Incubators, BOD Incubators, Refrigerators, Freezers, Lyophilizes, Ovens and Muffle Furnace Fermenters.



The data logged from the mapping of the above equipment is further processed to give analysis reports like F_0 values, lethal rate, standard deviation, lag time in case of autoclaves and Mean Kinetic temperature value, Hot spot and cold spot identification in case of other equipment's and rooms. This process can be certified by CFR21 Part of 11 Compliance software.

Autocal also provides qualification services for all other manufacturing / utility and packing equipment's.



FACILITY QUALIFICATION AND VALIDATION

Pharmaceutical facilities are required to comply with the FDA's current Good Manufacturing Practices (cGMPs) and other regulatory bodies. The validation effort documents that a facility's design meets the intent of the cGMP's.

Our key competencies lie in state-of-the-art laboratories, cGMP areas, pilot plants, facility automation and advanced process controls and specialized utility systems e.g. for sterile manufacturing.

AUTOCAL Validation team are experts at new facilities, performing HVAC, Validation, and validating other systems as part of a facility Qualification/validation utilities/ facility systems:

Cold Chain Mapping

Cold chains are universally uses in the food, pharmaceutical and some chemical shipments. The **cold chain** is a logistical system which manages temperature, often between 2° to 8° Celsius. It is a series of distribution activities which continuously maintain this temperature in order to protect the temperature-sensitive cargo from manufacture to the point of consumption. Unique to fresh produce cargoes, the cold chain requires to additionally maintain product specific environment parameters-which include air quality levels (carbon dioxide, oxygen, humidity and others) which makes this the most complicated cold chain to operate.

It is important for every cold storage to have a refrigerant, a valve, a vapour barrier and insulation during the cargo shipping, leakages may occur from the containers and when this happens, the temperature may increase which can lead to spoilage as well. In order to avoid such kind of problems, the containers have to be filled with insulators.

The primary segments of an integrated cold chain, which include;

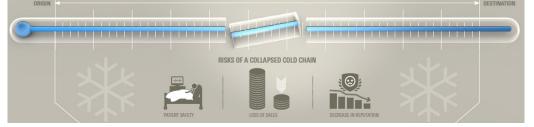
- 1) Packing and cooling fresh food products,
- 2) Food processing (i.e. freezing of certain processed foods,
- 3) Cold storage (short or long term warehousing of chilled or frozen foods),

4) Distribution (cold transport and temporary warehousing under temperature controlled conditions),

5) Marketing (refrigerated or freezer storage and displays at wholesale markets, retail markets and foodservice operations) can be simple or complex, low tech or high tech.

Cold chain logistics is the planning and management of the interactions and transitions between these five segments, in order to keep product at their optimum temperature for maintenance of quality, food safety and prevention of waste and economic losses. Speed is often the key to success when handling and marketing perishable product.

A cold chain is a temperature-controlled supply chain. An unbroken cold chain is an uninterrupted series of storage and distribution activities which maintain a given temperature range.





STEAM QUALITY TEST

The Steam Quality Testing service was created for manufacturers and processors of sterile products and medical devices that are required to meet international standards for steam sterilization. We have equipped ourselves with latest equipment's for steam quality test, for testing quality of pure steam PSG at user point like Autoclave, Sterilizers, Manufacturing tanks, SIP, Liophalizer, etc. It is Regulatory requirement to test the quality of steam periodically.

The testing involved in Facility Utility pure steam validation requires a continuous supply of saturated steam; preferably sourced from the actual line that supplies your sterilization systems. Too high a level of non-condensible gases will prevent the attainment of sterilization; too little moisture carried in suspension may allow the steam to become super-heated during expansion into the chamber, while excess moisture may cause damp loads. Where steam systems are either routinely or irregularly shut down, large quantities of air will be present in the distribution system on restarting.

Why Steam Quality Test is require?

- To Detect Non-condensable Gas, Dryness, Superheat
- To qualify plant/utility/clean/pure steam generators, steam distribution systems and steam supplies to autoclaves in accordance with cGMP (Orange Guide), HTM 01, HTM 2010: 1994, HTM 2031: 1997, EN 285: 2006, AAMI ST79, ISO 14937:2000, ISPE Baseline Guide for Steam and Water and PDA Technical Reports No. 1 & 48.
- To test your physical steam quality with assured and repeatable results in no time at all.
- To satisfy your Regulator/QA immediately.

The steam supply required for moist heat sterilization needs to be within the specifications set out in EN285:2006. This is:

Non-Condensable Gases: Required Result = 3.5%

Air and other gases such as Carbon Dioxide, which do not condense under the conditions of steam sterilization.

Superheat: Required Result = 25°C

Superheat steam is a steam at a temperature which is greater than its boiling point for its pressure. It will not condense until its temperature drops to its boiling point and until this occurs the moisture required for sterilization cannot be produced.

Dryness Value: Required Result = 0.90 for Non Metal / 0.95 for Metal Loads

Wet steam can cause wet loads which in turn can be considered un-sterile. In today's world, confidence of sterility is paramount. Modern packaging prevents re-infection when dry but bacterial retentive properties will be dramatically affected by the presence of moisture. A value of 1 represents steam that is completely dry and free of moisture. Steam Quality Testing Kit





PLC VALIDATION

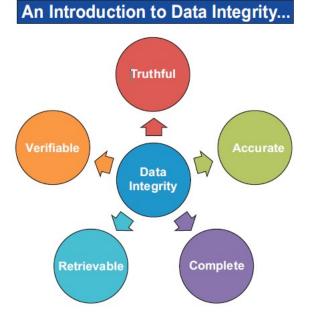
Autocal Solution Pvt. Ltd. offers Turnkey Validation services compliant to 21CFR part 11/Annex 11 regulations in pharmaceutical industry. We undertake complete turnkey Validation from basic to detail on PLC and computerised systems based on GAMP guidelines.

Services Offered:

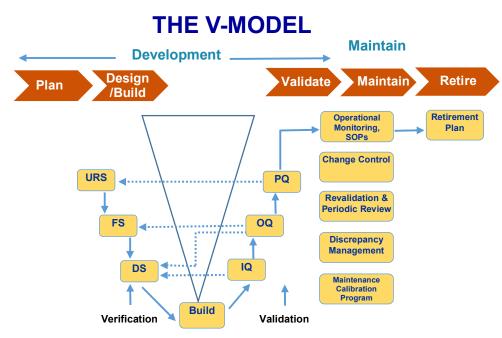
- Validate PLC based systems in Pharmaceuticals industries
- Validate Supervisory Control and Data Acquisition Systems (SCADA/DAS)
- Validate Building Management System (BMS) & Environment Control Systems (ECS)
- Human Machine Interface (HMI/MMI) System validation
- Validate Distributed Control Systems (DCS)
- HPLC system software validation in laboratory.
- **Wetwork application software validation**
- **4** Data Acquisition system (DAS) Software validation.
- Software validation of applications like LIMS, ERP, Track wise and other IT application software.
- **u** Technical support during regulatory compliance audits

As per Most appropriate & latest GAMP, 21 CFR Part 11, EU Annex 11 guideline based Compliance services for your new / legacy systems.

Good CSV can help you Reduce CAPA, Change Control, Batch Recall and give all people on earth a good Peace of mind including your shareholders. Data Integrity, Security, Patient safety and Product Quality is a key thing.







OUR SUPPORTS/ HIGHLIGHTS

- Most appropriate & latest GAMP, PIC/S, 21 CFR Part 11, EU Annex 11 guideline based Compliance services for your new / legacy systems.
- Comprehensive GAP & RISK Analysis.
- > Organising and Executing Activities at client's plants.
- Preparation of Protocols & Validation related Documentation as per Regulatory & Clients requirements.
- Accountable for completing activities as per Schedule, Proper Coordination with Client.
- Understanding Clients requirement. Preparation for Vendor Audits requires a thorough knowledge/ understanding of validation principles and quality philosophies.
- Coordination of QA and QC programs and functions.
- Implementation of company's first self-directed work teams resulting in a flat organization.
- Planning, development, and direction of Quality programs.

Computerized Systems that perform regulated functions must be qualified or validated. Computerized Systems may include networks (wired and wireless), workstations, operating system software, application software, equipment software, and interfaces with other computerized systems.

AUTOCAL offers a complete range of services for your computer validation needs and Complete Quality Assurance services for software implementation & validation projects.

- Preparation of Software Validation Document
- User requirement specification
- Execution of Validation Protocols and resolution of deviation
- 21 CFR Part 11 Gap Analysis remediation, and validation



HVAC Validation

Provides Clean Room / Area Validation services with complete set of latest Equipment's by experienced Engineers with sound knowledge. Our primary area of quality service is fulfilling validation, regulatory and compliance services from stand-alone automated equipment to start-up, commissioning and validation of new facilities.

HVAC (Heating, Ventilation & Air Conditioning) validation continues to be a source of anxiety for many manufacturers of pharmaceutical and biological products. HVAC validation is likely to be successful when good strategy and planning are involved in the process. AUTOCAL helps direct you in the right direction. There are many factors to consider in HVAC validation and it is best to take on a realistic approach based on good science, business and compliance sense. We are familiar with HVAC validation requirements and industry standard validation practices for your product forms, what documented evidence is needed for your HVAC Systems (e.g. drawings, specifications, balancing reports), and we know if your control systems are strong enough to be validated.

We then develop a general strategy consisting of the following factors:

- Classification of HVAC systems as GMP or non GMP systems.
- Determination of what documentation you have and what documentation you Need to create before validation begins.
- Development of targets for differential pressure, room air changes, temperature And humidity.
- Concentration of validation efforts on the areas where there is a direct on product impact.
- Validation of Building monitoring system that are connected to HVAC systems.

Complying with Standards:

- * ISO-14644-1,2,3
- ★ EU-GMP/ EC GMP
- ★ WHO-TRS-937
- ★ WHO-TRS-961
- ★ Schedule M

Services Offered for Clean Room Validation:

- ▲ Air flow Test & ACPH Calculations
- ▲ Installed Filter System Leakage Test (using PAO)
- ▲ Non-Viable Particle Count Test
- ▲ Recovery Test
- ▲ Air Flow Pattern Test (Using Water Fogger)
- ▲ Air Pressure Balancing
- Containment test
- ▲ Temperature & RH Measurement
- ▲ Light Intensity Measurement
- Sound Level Measurement











Compressed Air Line Validation

Clean Dry Air is essential for many different types of applications. Air compressors draw in large volumes of air from the surrounding atmosphere containing contaminants. the air compressor itself can also add contaminants. Process air contamination found in automotive spray paint air lines, powder coating air lines, pharmaceutical processing air lines, food processing air lines, instrument air lines and in nuclear facilities can affect product quality. A major problem in

compressed air systems is the presence of water, oil and solid contaminants which can affect air quality and lead to rust, scaling, instruments clogging, valves sticking and process contamination. Compressed Air is supplied for manufacturing process as well as for the operation of pneumatic controls for machine, instrument, spray system and other multiple uses.

The following parameters of compressed air system should be checked during the performance qualification.

AIR QUALITY IS IMPORTANT,

So have your compressed air tested periodically to assure:-

- 1. Protection of equipment and processes.
- 2. Safety for your employees
- 3. Energy efficiency of compressor
- 4. Lower operating and maintenance costs
- 5. Assure product quality
- 6. Meet standards/regulations

Services Offered for Compressed Air:

- Water Vapour (Moisture Content)
- Dew point Temperature
- Total Viable Count
- Oil Mist
- Non Viable Particle Count
- Hydrocarbon
- Various gases (CO₂,CO, NOX, HC, SO₂,O₂,H_{2S},)







List of Standard Instruments Validation HVAC & Compressed Air Validation

| Make / Model | | Parameter/ Range/ features/ specification |
|--|-------------------|--|
| Particle Counter Make : PMS Inc Model : 310A,310C, 350L, 5100 | | Range: 0.3 - 25.0 µm (6 channels) Accuracy: ± 5 % Test Parameter-Partial count test recovery test |
| Particle Counter Make : TSI-PC Model : 9500-01/9350-03 | | Range: 0.3 - 25.0 μm (6 channels) Accuracy: ± 5 % Test Parameter-Partial count test recovery test |
| Capture Hood Make: TSI Model: 8375 & 8380 | Accupalance B. | For 8375 Range: 25 to 2500 ft3/min,25 to 8,000 ft/min,±150 in H20,0 to 95 % RH,0 to 170 0 C For 8380 Range: 25 to 2500 ft3/min,25 to 8,000 ft/min,±150 in H20,0 to 95 % RH,0 to 170 0 C Test Parameter-Air Velocity Test |
| Gas Detector Tubes Uniphos | | Detection of various Gases and oil content |
| Aerosol Generator Make: TEC Model: AG -A1 | | Range: 540 - 5400 CFM Test Parameter-Installed Filter System leakage Test |



| | | Bringing Sharpness To The Quality Of Life Science |
|--|----------------------------------|---|
| Make / Model | | Parameter/ Range/ features/ specification |
| Lux Meter Make: LUTRON Model: 101 A | LIGHT METER LIGHT METER | Range: 0-1999,2000-19,990 20,000-50,000 Test Parameter-Light Intensity test |
| Digital Handy Cam Make: Panasonic Model:VDR-D50 | Panasonic autor | Test Parameter-Air Flow Pattern test |
| Sound Level Meter Make:LUTRON Model: SL4010 | B 5.0 SOUND LEVEL METER CC | Range: 35-80 dB,50-100dB,80-130dB Test Parameter-Sound Level Measurement |
| Fog Generator Make: Concept smoke system Model:Mini Colt 4 | | Test Parameter-Air Flow Pattern Test |



| Bringing Sharpness To The Quality Of Life Science | | |
|---|--|---|
| Make / Model | | Parameter/ Range/ features/ specification |
| Vane Type Anemometer Make: Testo Model: 417 | | Range: 0 to +50 °C +0.3 to +20 m/s Accuracy: ± 1 digit ± 0.5 °C $\pm (0.1 \text{ m/s} +1.5\% \text{ of m.v.})$ Resolution: 0.1 °C 0.01 m/s Volume flow: 0 to +99999 m ³ /h 0.1 m ³ /h (0 to +99.9 m ³ /h) 1 m ³ /h (+100 to +99999 m ³ /h) Test Parameter-Air Velocity Test |
| Photometer (SAM) Make: ATI Model: TDA 2H | | Range: 0 to 6000 ft/min, -17.8 to 93.3, 0 C 0 to 95 % RH Accuracy: ±3% of Rdg, ± 0.3 0 C, ±3 % RH Test Parameter-Installed Filter System leakage Test |
| Anemometer Make: Testo Model: Testo-425 | | Accuracy: 0 - 20 m/s Test Parameter-Air Velocity Test |
| Water Fogger Make: main land mart USA Model:MHB12 | | Test Parameter-Air Flow Pattern Test |
| Compressed Air Kit | | Test Parameter- Various type of Gases and Oil content |
| Micromanomater (SAM) Make: TSI Model: 8710 | | Range: 25 to 2500 ft3/min,25 to 8,000 ft/min,±150 in H20,0 to 95 % RH,0 to 170 0 C Accuracy: ±3% of Rdg,±2% of Rdg, ± 0.3 0 C, ±3 % RH Test Parameter-Air Velocity Test |



| Bringing Sharpness To The Quality Of Life Science | | |
|---|--|---|
| Make / Model Parameter/ Range/ features/ specification | | |
| Hot Wire Anemometer Make: HTC Instruments Model: AVM-08 | | Range: 0 to 6000 ft/min, -17.8 to 93.3, 0 C 0 to 95 % RH Accuracy: ±3% of Rdg, ± 0.3 0 C, ±3 % RH Test Parameter-Air Velocity Test |
| Van type Anemometer MAke:TSI Model: 5725 | | Range: 0.4 to 25.0 m/s & 0 to 50 0C Accuracy: ± (2 % + 0.2 m/s), 0.8 oC Test Parameter-Air Velocity Test |
| Photometer Make: TEC Services Model: PH-5 | | Range: 100% Accuracy:± 0.5 % Rdg Test Parameter-Installed Filter System Leakage Test |
| Anemometer Make: TSI Model: 9515 | | Range: 0 -20 m/s Accuracy: ±5% of Rdg or ± 0.025 m/s Test Parameter-Air Velocity Test |
| Aerosol Generator Make: ATI Model: TDA-4B | | Range: 840 – 8500 Test Parameter-Installed Filter System leakage Test |



| Make / Model | | Parameter/ Range/ features/ specification |
|---|--------------|---|
| Air Flow Pattern Tester Make: TVSP Model:FPT-500 | | Test Parameter-Air Flow Pattern Test |
| Photometer (SAM) Make: ATI Model: 2I | | Range: 0 to 6000 ft/min, -17.8 to 93.3, 0 C 0 to 95 % RH Accuracy: ±3% of Rdg, ± 0.3 0 C, ±3 % RH Test Parameter-Installed Filter System leakage Test |
| Dew Point Meter Make: Elektronik Model:EE371 | | Measurement of Dew point temperature for compressed air points |
| Gas Detector Tubes Make: Gastec | | Detection of various Gases and oil content |
| Clean Viewer Fogger Make:Airtech ACV-500 | CLEAN VIEWER | Test Parameter -Air Flow Visualization Test |
| Particle Counter Make : Lighthouse, USA Model : ApexZ3, Z50 | | Test Parameter-Partial count test recovery test |



List of Standard Instruments Validation

| 1 | Instruments va | |
|---|---------------------------------------|---|
| Make / Model | | Parameter/ Range/ features/ specification |
| Kaye Validator Make: Kaye Model: AVS | | Kaye Validator AVS 0.017^{0} Ck=1(Resolution and short term stability)IRTD Temerature standard 0.01^{0} Ck=1Temperature Reference 0.051^{0} Ck=1Total System Uncertainty 0.078^{0} Ck=1 |
| Mini temperature and humidity data logger Make: Testo Model: 174 H | testo 174H Rec %rH %rH Go | Temperature Range: -4° to 158 °F / -20 to +70 °C Accuracy: ±0.9 °F (-4° to 158 °F) / ±0.5 °C (-20 to +70 °C) |
| Kaye RF ValProbe Wireless Data Logger System Make: Model: | | Internal RH Sensor: Range 0-100%RH, Accuracy 2%RH |
| Button Operated Make:Yokogawa Model No. DX2000 | | Display Real time Measured data with input Signal a DC Voltage, Thermocouple resistance or contact signal |
| Paperless Recorder Make: Yokogawa Model No. GP10 | | Display Real time Measured data with input Signal a DC Voltage, Thermocouple resistance or contact signal DC Voltage, Thermocouple, RTD, DI |
| Paperless Data Recorder Make:Eurotherm Model: 6100A | | Display Real time Measured data with input Signal a DC Voltage, Thermocouple resistance or contact signal |



| Make / Model | Parameter/ Range/ features/ specification |
|--|--|
| Graphical Recorder Make: Chino Corporation Model:KR31A | Universal DC voltage: ±13.8mV, ±27.6mV, ±69.0mV, ±200mV, ±500mV, ±2V,±5V*, ±10V*, ±20V*, ±50V* (*with built-in voltage divider) DC current: With external shunt resistor |
| Steam Quality test Kit | Non-Condensable gases < 3.5% Dryness Value >0.9% Super Heat Value <25oC |



TESTING

We, at Autocal, are committed to fulfil your testing and measurement needs. We assure our customers, high quality, accurate & reliable results and excellent service to each and every customer. NABL has certified us prominently for our environmental and food testing services. With a NABL-Accredited testing report, you do not need to take a re-test. Most importantly, you can have greater access for your products in both the domestic and global marketplace.

Complying to standards :



- Validate test procedures
- On time & accurate test result.
- > All test reports dispatched within TAT.
- > Certifications & guidance as per ISO/IEC 17025 standards



Our services FOOD TESTING

The quality of food has a direct impact on the health and well-being of every individual who consumes the same. We provide vital food testing services to our clients which include

Nutrition Analysis & Labelling and Analysis of Food Adulteration and Contaminants. Our certified laboratories are equipped with highly sophisticated instruments like GC MS MS/ ICPOES/ HPLC with UV, fluorescent detector and highly skilled workers.

Government regulations and recommendations are become very stringent to maintain the general quality of the food supply, to ensure the food industry provides consumers safe food. In this regard Laboratory testing is an important process which looks at the sensory, Physical, chemical and microbiological properties of food.



ENVIRONMENTAL MONITORING & TESTING:

At Autocal, our latest equipments and highly skilled work forces perform air monitoring tests. Our laboratory has the expertise and tools to assist you with ambient air monitoring. We

analyse ambient air as per NAAQS. Ambient Air- Healthy air is essential for a healthy home. Take the first step to identifying potential airborne contaminants in your work or home environment to ensure the well-being of your family and your loved ones. The causes of air pollution vary from region to region, house to house and even room to room. Contaminated air seeps in from outside, but it also wafts up from a smorgasbord of indoor sources like construction materials, consumer products, mould, insects and



pets. Poor ventilation can let it accumulate to dangerous levels and can cause several health hazards.

Environmental monitoring is one of the most vital roles involved in environmental responsibility and sustainability. Environmental monitoring helps to ensure that the industrial projects being implemented abide by policies and practices to decrease their impact on the environment. Employing Environmental Monitors and testing laboratories to carry out required tests and submitting reports to the municipal and provincial governments help to verify industry's compliance to environmental regulatory standards.

WATER TESTING:

At our Labs, our latest equipment and highly skilled work forces, we perform various Physical, Chemical & Bacteriological analysis to identify the contents and composition of all kinds of water and ice. Water is an important element to regulate body so drinking water should be pure and hygienic. Otherwise, people may suffer from various water-borne diseases. Hence water used for





drinking & Various other purposes should be pure & hygienic.

Autocal offers affordable water testing to private houses/ camps/ hotels/ catering/ project sites/ water treatment plants/ villas/ farm. Whether your drinking water comes from a private well or public water supply, we offer home water testing package specifically designed for testing of both types of water supplies. Autocal is very happy to support your operations with our experience.

Value Added Services to Customer, Technical Guidance on Waste Water Treatment Plants, Quality of drinking water, Indoor Air Quality, Environmental Monitoring with Site Survey Report, Shelf life & Efficacy studies of Homecare & Personnel Products

COMPRESSED AIR TESTING:

Compressed air is a gas, or a combination of gases, that has been put under greater pressure than the air in the general environment. Current applications using compressed air are numerous and diverse, including jackhammers, tire pumps, air rifles, and aerosol cheese. According to proponents, compressed air also has a great deal of potential as a clean, inexpensive, and infinitely renewable energy source. Its use is currently being explored as an alternative to fossil fuels.

We at Autocal Solutions Pvt. Ltd analyse following types of compressed air types as per National & International Standards:





Compressed air as per ISO 8573 Part 1 Specification, Compressed air systems used in pharmaceutical facilities have to meet the requirements of ISA-S7.0.01-1996 and GMP for validated systems, Medical Gases as per NFPA- National Fire Protection Association & US Pharmacopeial convention, Cleanroom Gas Specifications as Per ANSI- American National Standards Institute, SCUBA Sport Diving Compressed air specification as per Compressed Gas Association, Pure Gas Specification as per Compressed Gas Association

OTHERS TESTING:

Consumer Products Analysis as per BJS, ISO & International Standard:

Shampoo, Cream, Shaving Cream, Detergent Powder & Cake, Dish Washing liquid & Cake, Floor Cleaners, Toilet Cleaners, Agarbatti, Naphthalene Balls, Room fresheners, Glass Cleaners

Fertilizers:

Nitrogen based fertilizers, Potash based fertilizers, Urea, Compost, Vermicompost, Nutrients to plant

Packing Material Testing as per EU guidelines & IS guidelines: Migration tests overall migration, Migration of elements

Miscellaneous

Purity of Chemical, Residual Solvents, Voc's volatile organic Compounds

Cattle Feed





SCOPE OF TESTING

NABL Accredited Laboratory As per ISO/ IEC: 17025 : 2005 Discipline: Chemical

| Discipline: Chemical | | |
|--------------------------------------|---|-----------------------------------|
| Product(s) / Material of test | Specific tests performed | Range of Testing/ Limits of |
| | | detection |
| Ambient Air, Work | PM 2.5 | $1 \text{ to } 10 \mu\text{g/m3}$ |
| Environment | | 10 to 100 μg/m3 |
| | RSPM or PM10 | 10 to 1000 µg/m3 |
| | SO2 | 5 to 100 µg/m3 |
| | NOx | 5 to 100 μg/m3 |
| | Ozone | 5 to 100 μg/m3 |
| | Ammonia | 1 to 700 μ g/m3 |
| Stack Emission | Total Particulate Matter | 10 to 1000 mg/ Nm3 |
| | Sulphur Dioxide and its Oxides | 5 to 500 mg/ Nm3 |
| | Oxides of Nitrogen | 0.1 to 500 mg/ Nm3 |
| | Carbon dioxide | 0.1 % to 10 % |
| | Oxygen | 0.5 % to 22 % |
| Source Sound Level | Sound level | 30 dB(A) to $130 dB(A)$ |
| Ambient Sound Level | Sound level | 30 dB(A) to 130 dB(A) |
| Cereals, pulses & cereal | | |
| products - | | |
| Food Grains, Pulses, Cereals, | Moisture | 1% to 30% |
| Flours & its products- Whole | Total Ash | 1% to 15% |
| and ground cereals, pulses, | Acid Insoluble Ash | 0.01% to 5% |
| Such as Wheat, Rice, Chana, | Alcoholic acidity as H ₂ SO ₄ | 0.05 % to 1% |
| Moong, Rajma, Atta, Maida, | Protein/Nitrogen | 1% to 60% |
| Besan,. | Gluten | 1% to 25% |
| Barley, Oats, Peas- | Carbohydrate | 20 % to 80% |
| Black & Green& White, | Fat | 0.1% to 25% |
| Masoor, rawa, Lapshi, Dal, | Energy | 10 Kcal to 2000 Kcal |
| Urd, Tur, Masoor, Chana, | Carbonates | Qualitative |
| barley flour, malt & malt | Acid Value/Acidity of extracted fat | 0.1% to 10% |
| based food, corn flour, other | | |
| flours used for food | | |
| preparation | | |
| Bakery & confectionery | | |
| Products – | | |
| Biscuits,Bread, Cakes, cake | Moisture | 0.1% to 10% |
| mixes,Cookies, Cookies | Fat | 0.5% to 25% |
| Mix, | Acidity of extracted fat as Oleic | 0.05% to 5% |
| Bakery related instant mixes | acid | 0.037010370 |
| nankatai, khari, | Ash | 0.1 % to 25% |
| bread sticks, toast, rusk, | Acid Insoluble Ash | 0.01 % to 5% |
| unbaked Maida based items- | Carbohydrate | 20 % to 80% |
| samosa Patti, pizza base | Protein/Nitrogen | 0.5 % to 25 % |
| | pH of aqueous solution | 2 to 10 |
| | Energy | 10 Kcal to 2000 Kcal |
| | Alcoholic acidity | 0.05 % to 0.5 % |
| | Salt Content as NaCl | 0.1% to 5% |
| | Carbonates | Qualitative |
| | Peroxide Value | 0.1meq/Kg to 15 meq/kg |
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| | | Bringing Sharpness To The Quality Of Life Science |
|-------------------------------|--------------------------------------|---|
| Product(s) / Material of test | Specific tests performed | Range of Testing/ Limits of |
| | | detection |
| Herbs, spices & | | |
| condiments - | | |
| Spices, Mix spices, herbs, | Moisture | 1 % to 50% |
| seasonings, Masala mix, | Extraneous matter | 0.1 % to 5 % |
| Gravy mix, dehydrated | Extraneous matter | 0.1 % to 5 % |
| spices & Condiments Whole | Total Ash | 0.1 % to 20% |
| & Ground. | Acid Insoluble ash | 0.02 % to 3% |
| Spices, Mix spices, herbs, | Water Insoluble Ash | 0.1 % to 3% |
| seasonings, Masala mix, | Solubility in Cold Water | 1 % to 90 % |
| Gravy mix, dehydrated | Alcohol soluble extract | 1 % to 70 % |
| spices & Condiments Whole | Protein | 1% to 50% |
| & Ground. | Carbohydrate | 10 % to 75% |
| & Ground. | Salt Content as NaCl | 0.1 % 15% |
| | Energy | 0.2 10 Kcal to 2000 Kcal |
| | Peroxide Value | 0.3 0.1meq/Kg to 15 meq/kg |
| | Non Volatile Ether Extract | 0.4 1% to 25% |
| | Fat | 0.5 1% to 25% |
| | rai | 0.3 1% 10 23% |
| Beverages | | 2 4- 10 |
| (Alcoholic/Non - | pH | 2 to 10 |
| alcoholic) – | Moisture | 1 % to 90% |
| Fruits and vegetable based | Total Solids | 20 % to 90% |
| beverages, Ready to serve | Ash | 0.1 % to 25% |
| beverage. | Acidity | 0.1% to 5% |
| | Protein/Nitrogen | 0.1 % to 50 % |
| | Ash insoluble in HCl | 0.01 % to 2% |
| | Presence of Mineral Acid | Qualitative |
| | Fat/Oil | 0.5 % to 80% |
| | Peroxidase Test | Qualitative |
| | Energy | 10 Kcal to 2000 Kcal |
| | Carbohydrates | 10 % to 75% |
| Nuts & Nuts products - | | |
| Dry Fruits | Moisture | 1 % to 15% |
| Dry Fluits | Fat | 5 % to 60% |
| | Protein | 1.0 % to 25% |
| | Carbohydrate | 5 % to 80% |
| | Energy | 10 Kcal to 2000 Kcal |
| | Ash | 0.1 % to 15% |
| | Acid Insoluble ash | 0.01 % to 5 % |
| | Free Fatty acid/Acidity of extracted | 0.05% to 10% |
| | fat | |
| | Peroxide Value | 0.1 to 50 meq /kg |
| | Extraneous matter | 0.1 to 10.0 % |
| | | |
| Milk and Dairy Products | Moisture | 0.1 % to 90 % |
| - Milk powder, Whey | Total Solids | 10 % to 99.5 % |
| powders, condensed milk, | Titrable Acidity as Lactic acid | 0.1% to 3% |
| flavored milk, butter, curd, | Milk Fat/Fat | - |
| chakka, Shrikhand, | Salt as NaCl | 0.1 to 85% |
| Ice-cream, Dairy based | Total Ash | 0.1 % to 5% |
| Instant mixes Yoghurt, | Milk Protein/Total Protein | 0.1 % to 8 % |
| Paneer, cheese, khoya, all | Added Starch | 0.1 to 90% |
| sweet meats, milk based | | Qualitative |
| cereal foods, Energy Drink, | | Zuantanive |
| partly skimmed and | | |
| skimmed milk. | | |
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| | | Bringing Sharpness To The Quality Of Life Science |
|-------------------------------|---|---|
| Product(s) / Material of test | Specific tests performed | Range of Testing/ Limits of |
| | | detection |
| Milk and Dairy Products | | |
| - Milk powder, Whey | Added Sugar | Qualitative |
| powders, condensed milk, | Urea | Qualitative |
| flavored milk, butter, curd, | Carbonates | Qualitative |
| chakka, Shrikhand, | pH | 2 to 10 |
| Ice-cream, Dairy based | Total Solid Not Fat | 0.1 to 90% |
| Instant mixes Yoghurt, | | |
| Paneer, cheese, khoya, all | | |
| sweet meats, milk based | | |
| cereal foods, Energy Drink, | | |
| partly skimmed and | | |
| skimmed milk. | | |
| Jams, Juices, Sauces & | pH | 2 to 10 |
| Concentrates - | Moisture | 1 % to 90% |
| Sauces, Syrups, Sharbats, | Total Solids | 20 % to 90% |
| Nectars, Squashes, Ketchup. | Ash | 0.1 % to 25% |
| | Acidity | 0.1% to 5% |
| | Protein/Nitrogen | 0.1 % to 50 % |
| | Ash insoluble in HCl | 0.01 % to 2% |
| | Presence of Mineral Acid | Qualitative |
| | Fat/Oil | 0.5 % to 80% |
| | Salt as NaCl | 0 % to 10% |
| | Peroxidase Test | Qualitative |
| | Insect & Fungal Growth | Qualitative |
| | Energy | 10 Kcal to 2000 Kcal |
| | Carbohydrates | 10 % to 75% |
| | | 2 . 10 |
| Other - Culinary pastes, | pH | 2 to 10 |
| pickles, chutneys, Soups, | Moisture | 0.1 % to 90% |
| soup powders, Snacks, | Total Solids | 20 % to 90% |
| Convenience Products, | Ash Asid Value (Asidity of Extracted Fat | 0.1 % to 25% 0.01% to 50% |
| Ready to eat products, Ready | Acid Value/Acidity of Extracted Fat Protein/Nitrogen | 0.1 % to 50 % |
| to cook products and ready | Ash insoluble in HCl | 0.1 % to 30 % |
| to eat products. | Fat/Oil | 0.5 % to 80% |
| | Salt as NaCl | 0 % to 10% |
| | Peroxidase Test | Qualitative |
| | 1 0102100355 1581 | Qualitative |
| Others – | Energy | 10 Kcal to 2000 Kcal |
| Culinary pastes, pickles, | Carbohydrates | 5 % to 80% |
| chutneys, Soups, soup | Caroonyuratos | |
| powders, Snacks, | | |
| Convenience Products, | | |
| Ready to eat products, Ready | | |
| to cook products and ready | | |
| to eat products. | | |
| Oil Seeds & by products | Moisture | 1 % to 15% |
| | Fat | 5 % to 60% |
| | Protein | 1.0 % to 25% |
| | Carbohydrate | 5 % to 80% |
| | Energy | 10 Kcal to 2000 Kcal |
| | Ash | 0.1 % to 15% |
| | Acid Insoluble ash | 0.01 % to 5 % |
| | Free Fatty acid/Acidity of extracted | 0.05% to 10% |
| | fat | |
| | Peroxide Value | 0.1 to 50 meq /kg |
| | Extraneous matter | 0.1 to 10.0 % |
| | | 0.1 10 10.0 /0 |



| Discipline: Microbiology | AUTOCAL Bringing Sharpness To The Quality Of Life Science |
|---|---|
| Product(s) / Material of test | Specific tests performed |
| I Water | |
| <u>I.Water</u> Water - Drinking water, Packaged drinking water, Packaged natural mineral water, Water for construction purpose, Water Purifiers, Ground water/Surface water, Water for Medicinal Purposes, Distilled/ Demineralised Water. | Aerobic microbial count at 37°C/Aerobic microbial count at 20-22°C/ Total Viable count / Total Plate count /Standard Plate Count / Total Bacterial count/ Aerobic bacterial count/Aerobic Plate Count/ Heterotrophic Plate count, Coliforms/ Total Coliform/ Coliform count/ Coliform bacteria, Escherichia coli/Thermo tolerant coliform Bacteria, Fecal coliform, Pseudomonas aeruginosa, Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella spp., Fecal streptococci, Sulphite reducing anaerobes Shigella spp. Vibrio cholera, V. parahaemolyticus, Yeast and Mould |
| Water - Water for Swimming pool and spas | Standard Plate Count, Coliform Organisms. |
| Water -Water for Processed food industry, Water for industrial purpose | Coliform bacteria, Standard Plate Count, Proteolytic Organisms & Lipolytic Organisms, Thermophillic Organisms |
| II.Food and agricultural products Other Specified Food Items - Ready to Eat Food - Raw & Processed, Partially cooked, Cooked Feed and Feeding stuffs. | Aerobic microbial count at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Faecal streptococci/Enterococci, Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus, Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus |
| Bakery & Confectionery Products - Biscuits,Bread, Cakes, cake mixes,Cookies, Cookies Mix, Bakery related instant mixes nankatai, khari, bread sticks, toast, rusk, unbaked Maida based items– samosa Patti, pizza base. | Aerobic microbial count at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus, Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore count, Clostridia spp. /Anaerobic spore count, Bacillus cereus, Faecal streptococci/Enterococci |
| Herbs, Spices & Condiments - Spices, Mix spices, herbs, seasonings, Culinary pastes, Masala mix, Gravy mix, dehydrated spices & Condiments Whole & Ground. | Aerobic microbial count, at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus, Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore count, Clostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus, Faecal streptococci/Enterococci |
| | |



| <u>Product(s) / Material of test</u> | Specific tests performed |
|---|---|
| Fish & Sea Foods - Raw & Processed, Partially cooked and fully Cooked Fish & Fish Products. | Aerobic microbial count, at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus, Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore countClostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus, Faecal streptococci/Enterococci |
| Milk and Dairy Products - Milk powder, Whey powders, condensed milk, flavored milk, butter, curd, chakka, Shrikhand, Ice-cream, Dairy based Instant mixes Yoghurt, Paneer, cheese, khoya, all sweet meats, milk based cereal foods, Energy Drink, partly skimmed and skimmed milk. | Aerobic microbial count at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus, Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore countClostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus, Faecal streptococci/Enterococci |
| Nuts & Nuts Products - Dry Fruits, Chikki, Peanuts etc. | Aerobic microbial count at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticus |
| Nuts & Nuts Products - Dry Fruits, Chikki, Peanuts etc. | Detection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore count, Clostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus, Faecal streptococci/Enterococci |
| Snacks and Instant Mixes - Ready to eat products, ready to cook products of all varieties. | Aerobic microbial count at /Total Viable count /Total Plate count /standard Plate Count /Total bacterial count/Aerobic bacterial count/Aerobic Plate Count, Enterobacteriaceae, Shigella spp., Coliforms, Vibrio spp./ Vibrio cholera/ Vibrio parahaemolyticusDetection and enumeration of E. coli., Detection and Enumeration of Staphylococcus aureus / Coagulase positive Staphylococcus aureus, Salmonella Spp., Listeria monocytogenes, Clostridia spp. /Anaerobic spore count, Clostridia spp. /Anaerobic spore count, Yeast &Mould Count, Bacillus cereus, Faecal streptococci/Enterococci |
| III. Environment and Pollution Effluents/Waste Water | Faecal Coliform |
| Hygiene Monitoring of Surfaces | Total Aerobic Count/ Total Plate count/Aerobic Microbial count/ Total Viable count, Yeast &Mould Count, E.coli Salmonella spp. Staphylococcus aureus / Coagulase positive Staphylococcus aureus |
| Hygiene Monitoring of Environment | Total Aerobic Count/Total Plate count/Aerobic Microbial count/ Total Viable count, Yeast &Mould Count |



List of Reference Standards-TESTING

| Make / Model | Parameter |
|---------------------------------------|---|
| Hot Air Oven 03 Make : Sakav | Moisture, Total Solids |
| Muffle Furnace Make : Sakav | Ash, Acid Insoluble Ash,Sulphated Ash, Water Soluble Ash |
| Vacuum Oven Make : Sakav | Moisture |
| Soxhlet Apparatus Make : Biosystem | Fat, Non Volatile Ether Extract |



| | Bringing Sharpness To The Quality Of Life Science |
|--|---|
| Make / Model | Parameter |
| Gerber Centrifuge Make : B.S Export | Fat |
| pH-Conductivity Meter Make : Spectralab, Model: PH CON | pH, Conductivity |
| Gas Chromatography Make: Agilent Technolgies, Model: 7890B | Alcohol Content, FAME Profile |
| GCMS Make: Agilent Technolgies, Model: 7000D | Pesticide Residues |



| Make / Model | Parameter |
|--|---|
| Head Space Sampler Make: Agilent Technolgies, Model: 7697A | Volatile Organic copounds in water, soil, Air etc. |
| HPLC Make: Agilent Technolgies, Model:1260 | Vitamins, Aflatoxins, Food Additives |
| ICP-OES Make : Agilent Technolgies, Model: 5110 | Metals |



| Make / Model | Parameter |
|--|---|
| FTIR Make : Agilent Technolgies, Model: Carry 630 | Identification of Compound |
| UV Spectrophotometer Make: M. N. Germany Model: NUV20325 | Colour, Phosphorus, Sulphate, Nitrate, Nitrite, Silica, Residual Chlorine, Phenolic compounds, Cyanide etc. |
| UV Spectrophotometer Make : Shimadzu, Model: UV-1800 | Colour, Phosphorus, Sulphate, Nitrate, Nitrite, Silica, Residual Chlorine, Phenolic compounds, Cyanide etc. |
| Digital Colony counter Make : Biosystem Model: 10DCC01 | Colony Counter |



| Make / Model | Bringing Sharpness To The Quality Of Life Science Parameter |
|--|---|
| Sample Homogenizer Make : Merck | Homogenizer |
| Binocular educational microscope Make : Labomed Model: Vision 200 | Microscope Determination |
| Laminar Air Flow Make : Biosystem Model: BSC – LAF | Microbiological Analysis |



AUTOCAL FAMILY...



AUTOCAL acknowledges the fact that apart from its world-class infrastructure and state of the-art technology, the most valuable resource is its human asset. It is the dedication and collaboration of its people that has helped AUTOCAL transform its dreams and ambitions into realities and achievements.

The AUTOCAL family comprises of professionals handpicked from different faculties handling an array of diverse operations. Similarly, experienced professionals steer crucial operational domains like marketing, accounts & finance and human resources together with engineering and other operational areas.

The core management team responsible for formulating the company's growth strategies comprises of innovative, entrepreneurial, and collaborative senior management members led by the Founder and Managing Director and are responsible for building AUTOCAL from a blue print project to its current global leadership position.

Collectively AUTOCAL team has built the company into a highly respectable and admired Calibration and Validation Company in the Indian Pharmaceutical industry.

Apart from the above there are 200 ITI/Diploma trained technicians and other office backup staff.

We are proud to say that we are the only calibration company in India having a strength of more than 250 people and fourteen branches.



WE ARE PROUD TO BE ASSOCIATED WITH.....

3 D Systems, A Star Coating, A.B & Sons, A.S. Engineering Works, A.S.Controls Pvt Ltd, A.S.Moloobhoy Pvt, Ltd, A.T.E.Envirotech Pvt Ltd, A.V.M. Laboratories, A.W.Faber Castell India Pvt Ltd, AAD Corporation Ltd, Aaditya Finechem (P) Ltd, Aakar Engineering Services, Aakash Manufacturing Company Pvt Ltd, Aalap Enterprises, Aanjaneya Biotech Private Limited, Aaradhana Plastics Pvt Ltd, Aarav Fragrances & Flavours Pvt Ltd, Aart Infosoft Pvt Ltd, Aarti Drugs Ltd, Boisar, Aarti Industries Ltd (Bharuch), Aarti Industries Ltd Boisar, Aarti Industries Ltd. Dombivali, Aarya Tek Technologies, Aayurmed Biotech Pvt. Ltd, ABB Limited, ABB LTD (NASHIK), Abbott Healthcare Pvt Ltd (Goregaon), Abbott Healthcare Pvt. Ltd., Abbott Healthcare Pvt. Ltd., Abbott Healthcare Pvt. Ltd, Abbatt Healthcare Pvt. Ltd, Accurate Engineering Pvt Ltd, Accurate Engineering Co Pvt Ltd (S), Accurate Labs, Accutest Biologics Pvt. Ltd, Accurate Research Laboratories (I) Pvt. Ltd., ACME Generics LLP, Acme Lifescience, ACRV Aircon Projects, ACS Engineering Pvt Ltd, Action Engineers, Acumen Calibrations, Acumen Tech Sol Pvt Ltd, Adarsh Industries, Addept Engineers, Aditi Associated/DP Interprises, Adit in Butsries, Aditya Svietms Soltia Vaniguade Aditya Brila Science & Technology Co Ltd, Adarsh Industries, Adept Engineers, Adita Sustems Aditya Nitine Aditya Svietms Soltia Vitt Anpliances Ltd. Anditya Enterprises. Aditya Birla Retail Limited, Aditya Birla Science & Technology Co Ltd., Aditya Enterprises, Aditya Plastic, Aditya Vidyut Appliances Ltd., Adore Pharmaceuticals Pvt. Ltd., Adtech Inventions Pvt Ltd, Advance Composite Pvt Ltd, Advance Marks & Labels Pvt. Ltd., Advance Power Display Systems Ltd, Advanced Bolting Solution Pvt. Ltd. - Navi Mumbai, Advanced Bolting Solutions Pvt. Ltd, Advanced Fittings Pvt. Ltd., Advanced File Advanced Power Sources Ltd, Advanced Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, Advanced Power Sources Ltd, Advanced Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, Source Power Sources Ltd, Advanced Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, Source Power Sources Ltd, Advanced Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, Source Power Power Power Pisplay Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, Source Power Pisplay Pvt. Ltd, Pv Advanced Power Sources Ltd, Advanced Systems Lab, Advent Engineers, Advy Chemical, Aero Interiors Pvt Ltd, Aero Pharma (Silvassa), Aero Pharma Pvt. Ltd, (Mulund), Aero Pharma Pvt. Ltd, Aerosmee Marketing Co. Pvt. Ltd., Aerospace Technical Services, Aesseal Coldweld Pvt. Ltd, Afriso India Pvt Ltd, Aggarwal Engineering Works, Agniraksha, Agog Pharma Ltd., Agrosurg Irradiators (I) Pvt. Ltd, ACV Systems Pvt Ltd, AIC Lab Equipments Pvt Ltd(S), Air India, Air India Limited, Air Micron Cleantech, Air Miracle, Airmistic Engineers Pvt. Ltd, Airpac Cleantech Pvt Ltd, Airtech, Airtech Systems Pvt Ltd, Alshwarya Healthcare, Ajanta Agencies, Ajanta Exports, Ajanta Pharma Ltd. (Chikalthana), Ajanta Pharma Ltd, Ajanta Pharma Ltd, (Kandivali), Ajanta Pharma Ltd. (Paithan), Ajanta Pharma Ltd, Alvaragabad), Ajas Components Pvt. Ltd, Alay Systems Pvt Ltd, Akh Pipe Fittings Pvt Ltd, Akhil Wires Pvt. Ltd, Akom India Private Ltd, Akshaj Enterprises, Akshaj Enterprises (S), Alan Electronic Systems Pvt Ltd, Alano Motors Pvt Ltd, Alon Motors Pvt Ltd, Alcon Industries, Alembic Ltd (Vadodara), Alembic Ltd. – Baddi, Alembic Pharmaceuticals Ltd, Alembic Pharmaceuticals Ltd (Sikkim), Alfa Packaging (Silvassa), Alkem Health Science, Alkem Laboratories Ltd(Taloja), Alkem Laboratories Ltd, Allana Cold Storage Ltd, Allana Investments & Trading Co. Ltd., Allanasons Ltd, Alloy Polymers India Pvt Ltd, Allv Pharma Otions Pvt Ltd, Allianz Formulations, Alliance INC, Alliance Forcalita, Allianz Transformers Pvt Ltd, Alloy Polymers India Pvt Ltd. Allv Pharma Otions Pvt Ltd. Allianz Pharmaceuticals Ltd, Allianz Pharma Eucl, Allianz Transformers Pvt Ltd, Alloy Polymers India Pvt Ltd. Allv Pharma Otions Pvt Ltd. Allianz Pharma Eucle Pharmaceuticals Pvt Ltd, Allianz Pharma Formulations, Alliance INC, Alliance Packaging, Allianz Transformers Pvt Ltd, Allied, Alloy Polymers India Pvt Ltd, Ally Pharma Options Pvt. Ltd., Almighty Auto Ancillary Pvt Ltd, Alok Industries Limited, Alot Hitek Pvt. Ltd., Alpana Enterprises, Alstom Hydro R&D India Ltd, Alumayer India Pvt. Ltd, Amar Jyot Chemicals Corporation, Ambuja Cements Ltd, Ameeja Enterprises, American Sensor Technologies Inc, Ametek Instruments India Pvt Ltd, Ametek Instruments India Pvt Ltd, Coelhi), Amey Industries, Ami Industries, Amit Engineering, Amitronics Pvt Ltd, Amity Components, Amity Power Products Pvr Ltd, Ammuniton Factory, Amod Engineering Works, Amog Precision Tools, Amon Engineering, Annuor Control, Anany Components, Annu Y Dower Products Pvr Ltd, Ammuniton Factory, Amod Engineering Works, Amog Precision Tools, Amon Engineering VI. Ltd, AMV Powder Coating and Phospetting, Analytical Testing Services, Anand Control, Anandial & Ganesh Podar Society, Anatek Services Pvt. Ltd, Anchor Electricals Pvt Ltd, Anchor Mark Pvt. Ltd, AnG Lifesciences (1) Private Limited, Anicare Pharmaceuticals Pvt Ltd, Anika Electrotech, Anil Kumar Sunii Kumar & Company, Anisha Engineering, Services, Apex Packing Products Pharma Ltd, Ankur Drugs Ltd, (Hz), ANTS Ceramics Pvt Ltd, Anne Enterprises, Antuh Pharma Ltd, Apar Industrise Ltd, Apex Engineering Services, Apex Packing Products Pvt Ltd, APJ Laboratories Ltd., Aplab Limited, Apollo Soyuz Electrical Pvt. Ltd, Aportecon Pharmaceuticals Pvt. Ltd, APT Controls, Aqua Lab, Aqua Vitoe Laboratories, Aquarius Shipyard Pvt Ltd, Aquasmith Water Solution Pvt Ltd, Arctic Solutions, Arch Pharmalabs Ltd. (Boadian), Arch Pharmaceuticals Pvt Ltd. (Arch Pharmaceuticals Pvt Ltd. (Madhyapradesh), Aristo Pharmaceuticals Pvt Ltd., Arti Rubber Ind Ltd., Artech Instruments & Controls Pvt Ltd., Arun & Co., Aruna Pvt Ltd. (Boadian), Aristo Pharmaceuticals Pvt Ltd. (Boadian), Arun & Co., Aruna Pvt Ltd. (Boadian), Aristo Pharmaceuticals Pvt Ltd. (Boadian), Arun & Co., Aruna Pvt Ltd. (Boadian), Aruna Pvt Ltd. (Boadian), Arun & Co., Aruna Pvt Ltd. (Boadian), Aruna Pvt Lt Engineering Works, Aryameya Enterprises, Asahi India Glass Ltd, ASB International Pvt. Ltd., Ascent Techno Solutions Private Ltd, Asha Electronics Pvt. Limited, Asha Electronics Pvt. Ltd, Asha Industries, Ashapura Roadlines, Ashco Niulab Industries Ltd., Ashida Electronics Pvt Ltd, Ashirwad Hospital & Research Centre, ASHRAE Clean Room Presentations (P) Ltd, Ashtavinayak Auto, Asian Heart Institute & Research Centre Pvt. Ltd., Asian Paints Ltd, Asian PPG Limited, Associated Cables Pvt. Ltd, Associated Capsules Pvt. Ltd., Astec Valves & Fitting Pvt. Ltd, Astra Microwave Products Ltd, AstraZeneca Pharma India Ltd, Astron Research Limited, Astron Research Ltd., Atco Controls (India) Pvt Ltd, Ateindia Envirotech Pvt Ltd, Athena Drug Delivery Solutions Pvt. Ltd, Athene Laboratories, Atit Engineering Company, Atlas Copco India Pvt Ltd, Atlas Mtt India Pvt. Ltd, Atlast Fisheries Pvt Ltd, Atra Pharmaceuitcals, Atra Pharmaceuticals Pvt. Ltd.Unit I, Atra Pharmaceuticals Pvt.Ltd Unit II, Attuned Polymer Group, Auro Laboratories Ltd., Auro Works, Aurochem Laboratories (I) Pvt. Ltd (Unit 2), Aurochem Laboratories (I) Pvt. Ltd, Aurochem Pharmaceuticals (I) Pvt. Ltd, Auto Instrument Calibration Lab (S), Autobahn Enterprises Pvt Ltd, Autocop India Pvt Ltd, Autodata, Automatic Tiles & Marbles Inds. Pvt. Ltd, Automotive Test Systems, Autopro, Avant Garde Cleanroom & Engg Solutions Pvt Ltd, Avantor Performance Materials (RFCL Ltd), Avantor Performance Materials India Ltd, Avcon Controls PVL Ltd, Avis Cientific Calibration and Services, Aviza Technologies, AVL India PVL Ltd, Avio Toganics Ltd, AXA Parenterals Ltd, Axis Electrical Components(I) Pvt Ltd, Ayurchem Products, Ayushakti Ayurved Pvt. Ltd., A-Z Instrument Services, Aztek Pvt. Ltd, B.D.Bansal Steel Industries, B.G.Enterprise, B.J.Patel Surgicals, Bagai Enterprises, Bajaj Auto Ld, Bajaj Electricals, Bajaj Health Care Pvt. Ld., Bajaj Healthcare Ltd., Baldota Control and Equipments Pvt Ld, Bakrishna Enterprises, BARC, Baroda Heart Institute Clinical Laboratory, Barton Firtop Engineering (1) Pvt Ltd, BASF Construction Chemicals (India) Pvt. Ltd, BASF India Limited, Baumer Technologies India Pvt Ltd (S), Bavaria Motors Pvt Ltd, Becton Dickinson India Pvt. Ltd., Bee Pharmo Labs Pvt Ltd, Behr-Hella Thermocontrol India Pvt Ltd, Beico Multiple PV Ltd, BEL Optronic Devices Ltd, Belcon Engineers PV Ltd, Belimo Actuators India PVt. Ltd., Belladona Plasters Ltd, Bellota Agrisolutions and Tools PV Ltd. Bengal Calibration Laboratory, Bennett and Bernard Custom Homes, Benzochem Lifesciences Pvt. Ltd., Berger Becker Coatings Pvt Ltd, Betts India Private Ltd, BGP Healthcare Pvt. Ltd, Bhansali Precision Components, Bhansali Techno Components, Bharat Bijlee Ltd, Bharat Biotech International Limited, Bharat Biotech International Ltd., Bharat Chemicals, Bharat Petroleum Corporation Ltd, Bharat Serum & Vaccines Ltd, Bharat Serums & Vaccines Ltd. (Ambarnath), Bharat Tech, Bharti Shipyard Ltd, Bhavana Chemical Industries, Bhilai Calibration Laboratory, Bhoomi Appliances Pvt Ltd, Bhoruka Logistics Pvt Ltd, Bill Industries, BIMM Technologies Centre, Bio Scientific Research Laboratories (I) Pvt. Ltd, Biocon Ltd., Biogenics (India) Limited, Biopharmax India Pvt.Ltd, Bioshields – Goa, Biosystem Company, Bipin Pharma Steel, Birla Precision Technologies Ltd, Bisleri International Pvt. Ltd, Bitte Pharmaceuticals, Biztech Services, Bliss GVS Pharma Ltd(Andheri), Bliss GVS Pharma Ltd., Bloom Energy (India) Pvt Ltd, Blow Tech Engineers Pvt Ltd, Blue Circle Organics Pvt. Ltd, Blue Cross Laboratories Ltd., Blue Star Limited, Blue Star Limited (Chandigarh), Blue Star Limited (Daman), Boehringer Ingelheim India Pvt Ltd, Bombay Bioresearch Centre, Bombay Chemical Equipments, Bombay Chemicals Pvt Ltd, Bombay Hospital Trust, Bombay Hospital Trust – Mumbai, Bombay Metal & Steel Traders, Bombay Metel & Steel Traders, Boost Electronics, Borkar Color Packs Private Ltd, Borregaard South Asia Pvt Ltd, Brassica Pharma & Chemicals, Brassica Pharmaceutical & Chemicals, Breach Candy Hospital Trust, Brooks Laboratories Ltd., Brooks Laboratories Ltd., Boroks Laboratories Ltd., Baroki BSR Technologies Pvt Ltd, Building Energy Performance Laboratory, Bumper India Pvt Ltd, Bureau of Indian Standards, C.P.Engineering Works, C.P.Tech Engineering Pvt Ltd, Cachet Pharmaceuticals Pvt. Ltd, Caculo Earthmovers Pvt Ltd, Cadila Healthcare Limited (Vadodara), Cadila Healthcare Limited(Baddi), Cadila Healthcare Ltd – Baddi, Cadila Healthcare Ltd (Goa), Cadila Healthcare Ltd., Cadila Healthcare Ltd-Changodhar, Cali Instrument & Gauge Calibration Laboratory(S), Cali Labs Private Limited, CALTECH Pvt Ltd, Calyx Chemicals & Pharmaceuticals Ltd, Calyx Chemicals & Pharmaceuticals Ltd Dombivali), Camlin Limited, Caprihans India Ltd, Captech Engineers, Carewell International, Carotino (India) Pvt. Ltd, Carter Race Technologies Pvt Ltd, Castro Engineering Pvt Ltd, CCIC India Pvt Ltd, CCRT Laboratories, CEAT Limited, CEAT Limited (Gujarat), Celrich Products Pvt Ltd, Centaur Pharmaceuticals Ltd (Goa), Centaur Pharmaceuticals Pvt Ltd(Pune), Centaur Pharmaceuticals Pvt. Ltd, Central Drugs Testing Laboratory Mumbai, Central Proof Establishment, Central Railway, CG Lucy Switchgear Ltd, Chandok Automotive Manufacturers Ltd, Charak Pharma Pvt Ltd (Mumbai), Charak Pharma Pvt. Ltd(Baddi), Charak Pharma Pvt. Ltd, Chemicoat, Lucy Switchgear Ltd, Chandok Automotive Manufacturers Ltd, Charak Pharma Pvt Ltd (Mumbai), Charak Pharma Pvt. Ltd(Badd), Charak Pharma Pvt. Ltd, Chemicoat, Chemiline Inermids(India) Pvt. Ltd., Cheminnova Pharmaceuticals, Chemito Technologies Pvt Ltd, Chemline Inermids (India) Pvt Ltd, Chemtreat India Ltd, Chemtrols Industries Ltd, Cheryl Laboratories Pvt.Ltd., Chipita India Pvt Ltd, Choksi Laboratories Ltd(S), Chowgule & Company Pvt Ltd, Chemtreat India Ltd, Chemtrols Industries Ltd, Cheryl Laboratories Pvt.Ltd., Chipita Industries, Cipharm, Cipla Limited – Bhivandi, Cipla Limited (Goa), Cipla Ltmited (Goa), Cipla Ltd (Indice), Cipla Ltd (Indice), Cipla Ltd (Mumbai), Cipla Ltd (Pune), Cipla Ltd (Sikkim), Cipla Ltd(Vikhroli), Cipla Ltd., Cipla Quality Chemical Industries Ltd, Ciron Drugs & Pharmaceuticals, Ciron Drugs & Pharmaceuticals Pvt Ltd, Citizen Scale (I) Pvt Ltd (S), Classic Retail Imaging Solution Pvt Ltd, Classic Scientific, Classic Stripes Ltd-Unit I, Classic Stripes Pvt Ltd (Vasai), Classic Strips Ltd. Unit II, Classic Strips Pvt Ltd, Classic Strips Pvt Ltd, Classic Strips Pvt Ltd, Colabiration Laboratory - Pune, Clinical Medicine Infomatics India, Clion^{on} Valve Systems, CMS Computers Limited, CMS-Traffic Systems Ltd, CN Tech Engineers Pvt Ltd, Coast Marine Construction & Engineering Ltd, Cockerill Exports Pvt. Ltd, Coffee Day Global Ltd, Cold Star Logistics Pvt Ltd, Cold Weld Engineering Pvt. Ltd, Colagate Palmolive India Ltd (Goa), Colgate-Palmolive(India) Limited, Colorcon Asia Pvt Ltd, Colure Packs Pvt Ltd, Commanding Officer Ins Trupti, Con Tech CRC Pvt Ltd, Connectwell Industrise Pvt Ltd, Coral Clinical Systems, Coral Clinical Systems (Baddi), Coral Laboratories Limited, Corning Technologies India Pvt Ltd, Coshen Equipments, Cosine Calibration & Testing Laboratory, Cosme Biotech Pvt. Limited, Cosme Pharmaceuticals Limited, Corser Pharmaceuticals Ltd, Coshen Remedies Ltd, Covidien Engineering Services Pvt Ltd, CPS Oil & Gas Equipments Pvt Ltd, Creative Eng & Metal Works, Creative Labels Pvt Lt Compton Greaves Limited, Crystal Logistic Cool Chain Pvt Ltd, CTR Manufacturing Industries Ltd, CTS Datacenters Ltd, CTX Life Sciences Pvt Ltd, CU Inspections & Certifications India Pvt Ltd, Curie Manavata Cancer Centre, Custom Capsules Pvt. Ltd., D - Link (India) Ltd., D - Link (India) Pvt. Ltd.- Goa, D&H Secheron Industries Certifications India Pvt Ltd, Curie Manavata Cancer Centre, Custom Capsules Pvt. Ltd, D - Link (India) Ltd., D - Link (India) Pvt. Ltd. Goa, D&H Secheron Industries Private Ltd, D. P. Enterprises, D.B. Solutions, D.C.Engineers Pvt Ltd, D.G.Q.A, D.J.Electro Controls, D.K. Pharma Chem Pvt. Ltd, D.K.Pharma Chem Pvt. Ltd., D.M. Pharma(Solan), Dabur India Ltd, Dabur Pharma Ltd., Daksha Engineering Company, Dana India Technical Centre Pvt. Ltd., Datar Nouveau Energietechnik Ltd, Datar Genetics Ltd, Datar Power Management Pvt Ltd, Datwyler Pharma Packaging India Pvt Ltd, Daya Lubricants Pvt. Ltd., DBM Geotechnics & Constructions Pvt. Ltd, DCI Pharmaceuticals P. Ltd., De Nora India Ltd, DEE KAY Scientific, Deejay Capacitors Pvt Ltd, Deep Instruments, Deepak Nitrite Limited, Deepali United Mfg Pvt Ltd, Delta Engineering, Delta Instruments Company, Delta Lab, Devki Devi Foundation, Dewa Electro Systems, Dhanashree Engineers, Dhanashree Pvt. Ltd, Dift Holding India Pvt. Ltd, Diamond Pipe Supports Pvt Ltd, Dicitex Furnishings Ltd., Diebold Systems Pvt Ltd, DOL Motors Pvt Ltd, Doors & Doors Systems (India) Pvt. Ltd, Dortmund Laboratories Pvt. Ltd., Dow Engifab LLP, Dr Reddy's Laboratories Ltd (Unit IV), Dr. Balabhai Nanavati Hospital, Dr. Fixit Institute of Structural Protection &,



Dr. L.H. Hiranandani Hospitals, Dr. Lal's Path Lab Pvt. Ltd, Dr. Reddy's Laboratories Ltd (Unit VI)CTO, Dr. Reddy's Laboratories Ltd (Baddi), DR. Reddy's Laboratories Ltd(Bachupally), Dr. Reddy's Laboratories Ltd., Dr. Reddy's Laboratories Ltd. (Sez Area), Dr. Reddy's Laboratories Ltd., Unit-1), Dr.Batra's Positive Health Products Ltd., Dr.Reddy's Laboratories Ltd. = AP, Dr.Reddy's Laboratories Ltd. = Baddi, Drilbits Internationals Pvt Ltd, Drugs Controls Laboratory, DSM Sinochem Pharmaceuticals India Pvt Ltd, D-Tech Industries, Dupen Laboratories Pvt Ltd, Duralabel Graphics Pvt Ltd, Durga Udyog, Dynamic Gauge Pvt Ltd, Vasai), Dynamic Pumps & Projects (I) Pvt. Ltd., Dynomerk Controls, E.I.Dupont India Pvt. Ltd, Earth Care Enviro Solutions Pvt Ltd, Earth Metallurgical Services Pvt Ltd, Eastern Steel Industries, Eco Laboratories, Ecologic Chemicals Ltd, Ecological Laboratories Pvt Ltd, Edelweiss Integrated Commodity Management Ltd, Efacec India Pvt Ltd, Efacec Switchgear India Pvt Ltd, Efficienergi Consulting Pvt Ltd, Efficient Toroidal Coil Corporation, Ehara Industries, Eisai Pharmatechnology & Mfg. Pvt. Ltd., Elca Laboratories, Elcome Integrated Systems PV Ltd, Elcome Marine Services PV Ltd, Elder Pharmaceuticals Ltd. (Deheradun), Electro-Diagno Systems PV Ltd, Elcetro Pasma Equipment PV Ltd, Electrolas Protection System & Services, Electro Tech Integrators PV Ltd, Electrocraft (India) PV. Ltd, Electro-Diagno Systems PV. Ltd, Electro Pasma Equipment PV. Ltd, Electrolas India PV Ltd, Electromag Devices PV. Ltd, Electromet Projects, Electronet Equipments PV. Ltd, Electrone Tech Provence Company PV Ltd, Electrocraft (India) PV. Ltd, Electromag Devices PV. Ltd, Electromet Projects, Electronet Equipments PV. Ltd, Electropreumatics Motor Power Company PV Ltd, Electrocraft (India) PV. Ltd, Electromag Devices PV. Ltd, Electromet PV Ltd, Electrocraft PV Ltd, Electropreumatics Motor Power Company PV Ltd, Electrocraft (India) PV. Ltd, El Lilly & Co. (1) PV Ltd, Elind Induction Furances PV Ltd, Electros PV Ltd, Electropreumatics Motor Power Company PV. Ltd, Electrocraft (India) PV. Ltd, Elect, Eltek Equipment (Bombay) PV. Ltd., Eltek Systems, Emami Ltd, Embedded Power Automation, Emco Dynatorq Private Ltd, Electrocrafts, Electronet PV. Ltd, Electrocraft PV. Ltd., Electrocraft PV. Ltd. Emco Limited, Emcure Pharmaceuticals Limited, Emcure Phramaceuticals Ltd., Emerald Calibration Labs Pvt Ltd, Emerson Electric Company India Pvt Ltd, Emerson Network Power India Pvt Ltd, EMET Controls Pvt Ltd, Emil Pharmaceutical Inds. Pvt. Ltd, Emil Pharmaceuticals Pvt. Ltd., Emvoi Pharma, Emzor Pharmaceuticals Network rower india Pvt Lid, EMET Controls Pvt Lid, Emit Pharmaceutical inds: Pvt Lid, Emit Pharmaceuticals Pvt Lid, Emited and Pvt Lid, Endited Enditional Pvt Lid, Enditiona Enginners, Ericon Transformer, Ersten Electric, Erweka India Pvt. Ltd., Esco Biotech Pvt. Esco Biotech Pvt. Ltd., Esco Biotech Pvt. Ltd., Esco Biotech Pvt. Ltd., Esco Biotech Pvt. Ltd., Esco Biotech Pvt. Esco B Further and the set of the set PVL Ltd, Fine Line Circuits Etd, Finebolics Finarma Etd, Finecure Pharmaceuticals Etd, Finks Engineering Company, Finolex Cables Limited, Finornic Chemicals India PVL Ltd, Flamingo Pharmaceuticals Limited, Flash Point Equipment PVL Ltd, Fledon Engineering Works, Flex Art Foils PvL Ltd, Goa, Flexo Braid India, Flint Group India PVL Ltd, Flo Rite Engineering Corporation, Flocon Industries, Flora International, Florite Engineering Corporation – Vasai, FLSmidth Pfister India Ltd, Fluidmac Hose Industries, Flyjac Logistic PvL Ltd, FM Instrumentation, Foremost Industrial Products, Fortis Healthcare Ltd, Fortis Hospital, Fortis Hospitals Ltd (Banglore), Foundation For Innovative New Diagnostics, Fox Solutions, Franco Indian Pharmaceuticals PvL, Ltd, Fredun Pharmaceuticals Ltd, Fresenius Kabi India Pvt Ltd, Frese Innovative New Diagnostics, Fox Solutions, Franco Indian Pharmaceuticals Pvt. Ltd., Fredun Pharmaceuticals Ltd., Fresenius Kabi India Pvt Ltd, Fuji Electric India Pvt Ltd, Fresenius Kabi India Pvt Ltd, Fuji Electric India Pvt Ltd, Fusion Scientific Laboratories Pvt Ltd, Gamphray Laboratories, G.D.Instrument Calibration Centre, G3 Motors Ltd, Gatet I Turnkey Projects Ltd., Gadark Lab Pvt. Ltd, Galaxy Industries, Galaxy Instrumentation, Galaxy Surfactants Ltd, Galaxy Transmissions Pvt Ltd, Galpha Laboratories Ltd (Ankleshwar), Galpha Laboratories Ltd(P), Gammon India Limited, Ganesh Multitech Engineering Pvt Ltd, Galaxy Transmissions Pvt Ltd, GBC Packaging, GE India Exports Pvt Ltd, General Auto Electric Corporation, General Foundries Pvt. Ltd, General Motors India Pvt. Ltd, General Auto Electric Corporation, General Foundries Pvt. Ltd, General Motors India Pvt. Ltd, General Biopharmaceuticals Ltd., Gene Pharmaceuticals Ltd, Genom Biotech Pvt Ltd, Genova Biopharmaceutical Ltd, George Phillps Medical Engineering Pvt Ltd, Getinge India Pvt. Ltd, GetZ Pharma Research Pvt. Ltd., GIC INSU-FLEX Conductors Pvt Ltd, Giiava India Pvt Ltd, Gilbert & Maxwell Electricals Pvt Ltd, Gilbert & Maxwell Transformer Pvt Ltd, Girish Industries, Figure 1, Solo Electronics- Hyderabad, Global Healthcare Products, Global Lab, Global Lab - Mira Road, Global Medikit Limited, Global Vectra Helicorp Ltd, Globatronix (Bombay) Pyt Ltd., Globos field Bio Analytica, Globostonix (Bombay) Pvt. Ltd., Globus International, GMP Technical Solutions Pvt Ltd, Goa Antibiotics & Pharma Ltd., Goa Antibiotics A Pharma Ltd., Goa Antibiotics & Pharma Ltd., Goa Medicare Devices Pvt. Ltd., Goa Paints & Allied Products, Goa Roller Flow Mills Pvt Ltd, Goa Sintered Products Pvt Ltd, Goa Syenthetic, Godfrey Philips India Ltd, Godreg & Boyce Mfg Co. Ltd(S), Godrej Memorial Hospital, Gogate Electrosystems(N) Pvt Ltd, Gohil Industries, Gol Ship Repair Ltd, Golden Cross Pharma Pvt Ltd, Goldwin Medicare Ltd (Plant-1), Goldwin Medicare Ltd, (Plant-II), Goldy Finepacks Pvt Ltd, Gopaldas Vishram & Co. Ltd., Gopani Metal Industries Pvt Ltd, Govind Industries, Gov of Jharkhand, GP Petroleums Ltd, GPR Engineering Pvt Ltd, Grand Hyatt Goa, Graphite India Ltd, Grauer & Well India Ltd, Grindwell Norton Ltd, Group Pharmaceutical of Jnarknand, GP Petroleums Ltd, GPR Engineering PV Ltd, Grand Hyatt Goa, Graphine India Ltd, Grauer & Wein India Ltd, Grandwein Norton Ltd, Group Pharmaceutical Ltd., Group Pharmaceuticals Ltd., Groynetech, GSC Glass Ltd, Guala Closures India Pvt Ltd, Guardwel Industries Pvt Ltd, Guffe Biosciences Ltd., Guajard Enterprises, Gujarat Themis Biosyn Limited,Gulf Oil Corporation Ltd, Gulf Petrochem, GWS Engineers & Fabricators Pvt Ltd, Haftkind Bio-Pharmaceuticals Corporation Ltd, Hager Electro Pvt Ltd, Hakimi Enterprises, Haldex India Limited, Hallmark Automotive Pvt. Ltd, Hallmark Honda, Hans Impex, Harihar Electricals, Harman Plastic Industries, Harman Plastics Industries, Harmony International, Harshita Electricals, Harman Test House & Cons Services, Hawa Valves (India) Pvt. Ltd, Health Biotech (P) Ltd., Health Secure (India) Pvt Ltd, Healthcare Pharmaceuticals Ltd, Heatex Tools Pvt Ltd, Heft Engineers, Heinz India Pvt Ltd, Varves (India) PVL Ltd, Health Biotech (P) Ltd., Health Secure (India) PV Ltd, Health Care Pharmaceuticals Ltd, Health 2005 PV Ltd, Heith Engineers, Heinz India PV Ltd, Heligo Charters PV Ltd, Hella India Automotive PVt Ltd, Hema Laboratories Pvt. Ltd, Hemant Tools PVt Ltd, Herman Plastic Industries, Herman Research Products & Laboratories-Kandivali, Hexatec Instruments Pvt. Ltd, Hetero Drugs Ltd., Hetero Lab (Hydrabad), Hetero Lab. Ltd., Hexa Analytical Laboratories, Hexa Analytical Laboratories-Kandivali, Hexatec Instruments Pvt. Ltd., Hexatech Instruments Pvt. Ltd, HI Tech Calibration, Hi Tech Calibration – Vapi, Hi Tech Electronic Services (S), Hi- Tech Laboratory & Services (S), High Rise Fire Protection Systems, Highclean Ultrasonics, Hillman Gears Pvt Ltd, Himadri Foods Pvt. Ltd, Himedia Laboratories Pvt. Ltd., Hind Rectifiers Ltd, Hindalco Industries Ltd, Hindustan Aeronautics Ltd, Hindustan Coca-Cola Bev. Pvt. Ltd., Hindustan Coca-Cola Beverages Pvt. Ltd., Hindustan Constuction Co. Ltd., Hindustan Hardy Spicer Ltd, Hindustan Laboratories(Palghar), Hindustan Paints & Products, Hindustan Petroleum Corporation Ltd, Hindustan Petroleum Corporation Ltd (Goa), Hindustan Platinum Pvt Ltd, Hindustan Uni Lever Ltd., Hindustan Unilever Ltd(Silvasa), Hindustan Unilever Ltd, Hindus Engineers, Hi-Tech Laboratory & Services, Hiteck Brass Products Pvt Ltd, HK Tempsensors India, HLL Lifecare Limited, Holiday Inn Resort Goa, Hollister Medical India Pvt. Ltd, Hometrail Buildtech Private Limited, Hometrail Estate Pvt Ltd, Honeycomp International INC, Honeywell Automation India Ltd., HRJ Surgicals, Hugopharm Pvt. Edu, Honerata Bundeen Private Entrance, Honerata Estate Pvt. Edu, Honeycom Januara Hvc, Honeyweir Automaton India Pvt. Edu, Hos gugaars, Higophann Technologies Pvt Ltd, Huphen Electromech Pvt Ltd, Huphen Fabricator Pvt. Ltd, Hydae India Pvt. Ltd, Hyva(India) Pvt. Ltd, I B Scientific, I Kay Mould Tech, I.P.W.T.Corporation, Ichalkaranji Agro Foods, ICS Technologies, Ideal Cures Pvt Ltd (Goregaon), Ideal Cures Pvt Ltd (Khambhat), Ideal Cures Pvt Ltd, (Vasai), Ideal Cures Pvt. Ltd (Jammu), IFB Industries Ltd, IFE Foods, IC Petrochemicals Limited, Igloo Dairy Services Pvt. Ltd, IIT Bombay, IMA-PG India Pvt Ltd, Immacule Lifesciences Pvt Ltd, Immunetic Lifesciences Pvt Ltd, Index Con, Impress Container Co., Impress Pontainers Co., Impulse Pharma Pvt. Ltd, Incoi Transformers Pvt. Ltd, Indagro Foods Pvt Ltd, Indamer Aviation Pvt Ltd, Indchemie Health Specialities Pvt. Ltd (Baddi), Indchemie Health Specialities Pvt. Ltd., Indcoil Transformers Pvt. Ltd, Indeecon Equipments & Instruments Co, Indeus Life Sciences Pvt. Ltd, Indian Immunologicals Limited (Ooty), Indian Immunologicals Limited –Hydrabad, Indian Institute of Geomagnetism, Indian Institute of Technology, Indian Oil Corporation Limited, Indian Oil Corporation Ltd (Goa), Indian Oil Corporation Ltd (Taloja), Indian Oil Corporation Ltd (Wadala), Indian Oil Corporation Ltd(Pune), Indian Pens and Stationary, Indian Red Cross Society, Indian Rubber Manufacturers Research Association, Indian Technical Services, Indian Writing Instruments Pvt Ltd, Indigenous Services, Indo Bakels Pvt Ltd, Indoco Remedies Goa (P - II), Indoco Remedies Goa (Plant - I), Indoco Remedies Ltd (Rabale), Indoco Remedies Ltd (Unit III), Indoco Remedies Ltd. – Aurangabad, Indoco Remedies Ltd. (Baddi), Indoco Remedies Ltd. (P-I), Indoco Remedies Indus Chemicals, Indus Medical Centre, Indus Seafarers Clinic, Industrial Carbons (Virar), Industrial Engineering Syndicate, Industrial Rubber Products Pvt. Ltd, Infexin Laboratories Pvt Ltd, Infinite Plastics, Innova Pharmactive Pvt Ltd, Innovative Engineers, Inox Air Products Ltd, Inspector General of Police, Inspectorate Griffith (I) Pvt Ltd, Inspectorate Griffith India Pvt.Ltd., Insta Exhibitions Pvt Ltd, Instil Technologies Pvt Ltd, Instrumentation and Control Solutions, Insu Tech Corporation, Intas Pharmaceuticals Ltd, Intech Pharma Pvt Ltd, Integrate Techno Trade, Integrated Cleanroom Technologies Pvt Ltd, Integrated Electronics Technology P Ltd, Interglobe Hotels Pharmaceuticals Ltd, Intech Pharma Pvt Ltd, Integrate Techno Irade, Integrated Cleanroom Technologies Pvt Ltd, Integrated Electronics Technology P Ltd, Interglobe Hotels Pvt Ltd, Intertech Technologies Pvt Ltd, Intertek India Pvt. Ltd, Intertek India Pvt. Ltd. – Bangalore, Intertek India Pvt. Ltd. – Gurgaon, Intertek India Pvt. Ltd. – Tirupur, Invent Bio Med Pvt. Ltd., Invent Bio -Med Private Limited(Surat), Invent Farma Pvt. Ltd., Inventia Healthcare Pvt. Ltd. (Thane), Inventia Healthcare Pvt. Ltd., Invoctem Laboratories Ltd., Invotec Automation Pvt Ltd, INX International UK Ltd, ION Electricals Pvt Ltd, ION Exchange (India) Ltd, Ipca Laboratories Ltd. (Involtem Laboratories Ltd.), Invotec Automation Pvt Ltd, INX International UK Ltd, ION Electricals Pvt Ltd, ION Exchange (India) Ltd, Ipca Laboratories Ltd (MP), IPCA Laboratories Ltd), Silvason, Ipca Laboratories Ltd, Chehal, ICA Laboratories Ltd (Kandivali), IPCA Laboratories Ltd (MP), IPCA Laboratories Ltd), Invoter Automation Electronices Itd, (Dehradun), IRD Mechanalysis Limited - Andenalysis Limited - Anderia, Ishwari Healthcare Pvt Ltd, Isovolta(India) Pvt Ltd, IVP LIMITED, Iwai Electronics Private Limited, J Do Hardware Products, J J Glastronics Pvt Ltd, J. B Electroplaters Pvt Ltd, J. B. Chemicals & Pharma. Thane, J. B. Chemicals & Pharma, Kadaiya, J.B.Chemicals & Pharmaceuticals – Thane, J.B.Chemicals & Pharmaceuticals Ltd. – Kadaiya, J.B. Environic Cambrid Pvt Ltd, INP Kerker Com Ltd. India Pvt Ltd. Jeber String Pvt Ltd, Jebery String Pvt Ltd, Indiay Pvt Ltd, Indi B. Chemicals & Fharma: Thank, J. B. Chemicals & Fharmac, Radalya, J.B.Chemicals & Fharmaceuticals – Inanke, J.B. Chemicals & Fharmaceuticals – Kaudaya, J.B. Engineering Corporation, J.K.Cement Ltd., J.K.Mark-Con, Jabil Circuit India Pvt Ltd, Jabil Structul India Pvt Ltd, Jahave Engineering Works, Jabila Swe Ltd., Jabila Circuit India Pvt Ltd, Japane Fendenkare Ltd, Jayshree Electron Pvt Ltd., I en Hotel, Jesons R & D Technology Center, Jhunkam Lighting Sys. Pvt. Ltd., Jindal Saw Ltd, J.K.T. Enterprises Pvt Ltd. – Navi Mumbai, JKT Enterprises Pvt. Ltd., Johnson K Johnson Ltd (Dharavi), Johnson & Johnson India (P) Ltd, Joel Electricals, Johnson & Johnson Limited (Aurangabad), Johnson & Johnson Limited. (Mulund), Johnson & Johnson Ltd (Dharavi), Johnson & Johnson Ltd, –Baddi, Johnson & Johnson Medical, Johnson & Johnson Medical, HP, Johnson & Johnson It J. J. Electronic Instrumentation Joseph Leslie & Co. LLP, IRS Associates (JW engineering (JW et al.)). Johnson & Johnson Pvt Ltd. -Baddi, Johnson Control (I) Pvt. Ltd., Jol Electronic Instrumentation, Joseph Leslie & Co. LLP, JRS Associates, JSW Energy Ltd, Jubilani Foodworks Ltd, Jubilant Generics Limited, Jubilant Life Sciences Limited, Jubilant Life Sciences Ltd (Ambernath), Jubilant Organosys Ltd., Jubilant Pharma & Chemical Lab, Jumo India Pvt Ltd, Jupiter Electronics (S), Jupiter Hospital, Jupiter Integrated Sensor Systems Pvt. Ltd (S), JVM Industries, JVM Industries (S), Jyoti Switchgear Pvt.



Ltd, K.D.Instruments Services, K.D.R. Electronics, K.G.N.Diabetes & Endocrinlogy Centre, K.K.Engineering, Kaisha Manufacturer Pvt.Ltd., Kaisha Mfg. Pvt. Ltd., Kaizen Kaizen International, Kalapi Printing Press, Kalashri Electronics Pvt. Ltd., Kalika Instruments & Services, Kalki Chemical Industries, Kalpataru Organics Private Ltd, Kalpataru Organics Pvt. Ltd., Kalyani Industrial Services, Kamal Motors, Kamala Engineering, Kamaths Ourtimes Icecreams Pvt Ltd, Kanan Knitwear, Kanara Industrial Corporation, Kanekar Consulting Engineers Pvt Ltd, Kankan Engineers, Karuna Pharma Pvt Ltd, Kashyap Engineering Company, Kaynes Technology India Pvt Ltd, KD Building Solutions Pvt Ltd, Kedar Industries, KEM Hospital, Kemwell Biopharma Pvt Ltd, Keshava Organics (Boisar), Keshrup Systems Pvt Ltd, Key Organics Pvt. Ltd. (Mahad), Keyur Industries, Keyur Pharmachem India Pvt Ltd, Kg Project & Equipment Marketing Co. Pvt. Ltd., Khandelwal Associates Prakash Chambers, Khandelwal Laboratories Pvt. Ltd., Khurana Oleo Chemicals, Kilitch Drugs (India) Ltd.-H.P, Kilitch Drugs(India) Ltd, Kimplas Piping System Ltd, Kineco Pvt Ltd, Kiran Jewelry, Kirti Kirti Industries, Kohinoor Hospitals Pvt Ltd, Kokilaben Dhirubhai Ambani Hospital, Kokuyo Camlin Ltd, Komal Scientific Company, Koncept Engineers, Konkan Techno Services, Kool Ex Cold Chain Ltd, Kool Solutions, Korten Pharmaceuticals Pvt Ltd, Koso India Pvt Ltd, Koyna Engineers Pvt Ltd, Kraft Foods, Kraft Foods – Thane, Kreepa Kreepa Steel Industries, Krishna & Company, Krishna International, Krupa Tech Pvt Ltd, KRYFS Power Components Ltd, Kumar Sales Corporation, Kumud Metal Foundry Foundry Pvt. Ltd, Kundan Industries Limited, Kusam Electrical Industries Ltd, Kusam Meco Import Export Pvt. Ltd., Kusum Electrical Industries Ltd, Kusumgar Corporates Corporates Pvt.Ltd., L&T Construction, L&T Technology Services Limited, Lab Equip (I) Pvt Ltd, Lab House, Labcon Scientific Instruments Pvt. Ltd., Labindia Analytical Instruments Pvt. Ltd., Labindia Instruments Pvt Ltd, Laboratories Griffon Pvt. Ltd., Labtop Instruments Pvt Ltd, Lafil Engineering & Associates, Lakshmi Drugs Store, LAMFA Projects Pvt. Ltd., Landmark Consultants & Engg Technology, Larsen & Toubro Automation Ltd, Larsen & Toubro Ltd, Larsen & Engineers Pv Ltd, Leica Microsystems, Leo Circuit Boards Pv Ltd., Lesanto Laboratories, Lifesan Clinical Research, Lilavati Hospital & Research Centre, Linux Machines Machines Incorporation, Logiq Embedded Systems India Pvt. Ltd, Lotus Lab Pvt. Ltd., Lotus Techno Trade, Lourenco Marine, Loyal Industries, LTMMC & GH Medical College, Lupin Limited – PUNE, Lupin Limited (Boisar), Lupin Limited (Goa), Lupin Limited (Indore), Lupin Ltd (Mumbai), Lupin Ltd (Nagpur), Lupin Ltd (Vadodara), Lupin Ltd (Zrakpur), Lupin Pharmacare Ltd, Indore, Luxni Ply & Hardware Mill Store, M S Switchegar Pvt Ltd, M. J. Lab Pvt. Ltd, M. R. Healthcare Pvt. Ltd, M.G.M.Medical College & Hosp Central Laboratory, M.S.E.D.C.L, M/s. Asmi Enterprises, M/s. Emsons, CHW, Maad Building Innovations Pvt Ltd, Mabharm Private Limited, Mac Engineering Industries, Mac Systems, Macbrout Engineering Pvt Ltd, Mac-Chem Products(India) Pvt Ltd, Machine House India Pvt Ltd, Machine Tool Prototype Factory, Machinabrik Industries Pvt Ltd, Macheo Pharma Ltd. (Andheri), Macleods Pharma Ltd. (R & D), Macleods Pharmaceuticals Ltd(Sikfu), Macheos Pharmaceuticals Ltd, State, Baddi, Macleods Pharmaceuticals Ltd, R & D, Macleods Pharmaceuticals Ltd. (Andheri), Macleods Pharmaceuticals Ltd. (Sarigam), Macleods Pharmaceuticals Ltd., Baddi, Macleods Pharmaceuticals Ltd., Palghar, Madus Pharmaceuticals Pvt. Ltd, Magna Laboratories (P) Ltd., Mahalaxmi Enterprises, Mahanagar Gas Limited – Mumbai, Mahanagar Gas Ltd, Maharashtra Elec-Mech Works Pvt. Ltd, Maharashtra Pollution Control Board (Chandrapur), Maharashtra Pollution Control Board (Nashik), Maharashtra Pollution Control Board (Thane), Maharashtra Pollution Control Board Regional Lab, Maharashtra Pollution Control Board(Aurangabad), Maharashtra Pollution Control Board(Mahape), Maharashtra Pollution Control Board(Nagpur), Maharashtra Pollution Control Board(Ratnagiri), Maharashtr Rajya Sahakari Dudh Mahasangh Maryadit, Maharashtra State Electricity Dist Co Ltd, Mahavir Plastic Ind, Mahindra & Mahindra Ltd, Mahindra Ltd – Nashik, Nashik, Mahindra & Mahindra Ltd (Igatpuri), Mahindra & Mahindra Ltd (Nasik), Mahindra EPC Services Pvt Ltd, Mahindra Heavy Engines Pvt Ltd, Mahindra Sona Ltd, Mahindra Ugine Steel Co Ltd, Makjai Laboratories, Mallya's General Foundries Pvt. Ltd., Manasvi Industries, Mancare Pharmaceuticals Pvt Ltd, Mandovi Dry Docks, Mandovi Motors Pvt Ltd, Mangalam Drugs & Org. Ltd. Unit-I, Mangalam Drugs Unit II, Manguari Agro, Manja Pharmaceutical Pvt Ltd, Mankin Pharma Ltd., Manchi Pvt Ltd, Mankin Pharma Ltd., Manonay Interiors Pvt Ltd, Maquet Medical India Pvt. Ltd., Maral Overseas Limited, Marine Automation, Marine Electricals (1) (1) Pvt Ltd, Marine Electronics and Navigation Systems Pvt Ltd, Maritime Energy Heli Air Services Pvt Ltd, Marksans Pharma Ltd., Mars Enterprises, Maruit Hydraulics Pvt. Utd, Marine Electronics Pvt. Ltd, Marine Electronics Pvt. Ltd, Marksans Pharma Ltd., Mars Enterprises, Maruit Hydraulics Pvt. Pvt. Ltd, Mascasts, Mast Aviation, Mast Aviation Pvt Ltd, Master Tech Engineering, Material Testing Machines Services, Matrix Laboratories Ltd., Mars Enterprises, Maruit Hydraulics Pvt. Ltd, Nashik, Matrix Laboratories Ltd., Max Energy Pvt Ltd, Max Healthcare Institute Ltd, Max Signage Industries Pvt Ltd, Max Super Speciality Hospital, Maxeff Engineering Pvt. Ltd., Margiari Clinical Education & Research Centre Pvt, L, Mayuresh Industies, Mazgaon Dock Ltd, McCoo Pharma Pvt. Ltd., McGooch Marine Electricals Pvt. Ltd., Margiari Clinical Education & Research Centre Pvt, Ltd, Mayuresh Industies, Mazgaon Dock Ltd, McCoo Pharma Pvt. Ltd., McGooch Marine Electricals Pvt. Ltd., Margiari Clinical Education & Research Centre Pvt, Ltd, Mayuresh Industies, Mazgaon Dock Ltd, McCoo Pharma Pvt. Ltd., McGooch Marine Electricals Pvt. Ltd., Margiari Clinical Education & Research Centre Pvt. Ltd., Mayuresh Industies, Mazgaon Dock Ltd, McCoo Pharma Pvt. Ltd., McGooch Marine Electricals Pvt. Ltd., McGooch Marine Pvt. Ltd., McGooch Marine Electricals Pvt. Ltd., McGooch MCK Kutty Engineers Pvt Ltd, Measurements International LLP, Measuretest Corporation, Measurewell Technologies, Mec Well Pharma Machinery Co, Mecord Systems & Services Pvt. Ltd, Medhavi Industries, Medi Sales Agencies, Medibios Laboratories (P) Ltd., Medical Products Of India, Medicef Pharma, Medico Remedies Pvt. Ltd., Medicore Laboratories Pvt. Ltd., Mediforce Healthcare Pvt. Ltd, Medigraph Pharmaceuticals Pvt Ltd, Mediplus (India)Limited.(Haryana), Medispec (I) Ltd, Medispray Laboratories Pvt Equipments (India) Pvt. Ltd., Meena Elastomers Pvt Ltd, Meet Instruments and Calibration Services, Mega Engineering Pvt Ltd, Mega Rubber Technologies Pvt Ltd, Mehru Mehru Electrical & Mechanical (P) Ltd, Mehta API Pvt Ltd, Melody Healthcare Pvt. Ltd, Merck Limited-Goa, Merck Ltd Goa, Mercury Pneumatics Pvt Ltd, Mesco Tools & & Components, Mesha Pharma Pvt. Ltd., Meta Lab Scientific Industries, Metal Analysis & Services Pvt Ltd, Metal Fabrik India, Metal Form, Metal Power Analytical (I) Pvt. Ltd., Microsys Technology, Microxpress, MIDCO Ltd, Millenium Toyota, Millennium Agro Dynamic Pvt. Ltd, Minco India Pvt Ltd, Mini Electronic Industries Pvt Ltd, Miss Miss Elina Dawoodani, Miss Swetha Jain, Miss. Priyanka, Miss. Stuti Shah, Missionpharma Logistics (I) Pvt. Ltd, Mitra S.K.Pvt. Ltd, Mitsu Chem Pvt. Ltd., Mittal Enterprises, MKS Commercial Pvt Ltd, Mobile System Complex, DRDO, Model Bucket & Attachments Pvt. Ltd., Model Buckets & Attachments Pvt. Ltd., Model Infra Corporation Pvt. Ltd, Mohan Singh Pharmaceuticals Formulations, Monarch Pharmalines(HYD)Pvt Ltd, Mondelez India Foods Ltd, Mondelez India Foods Pvt Ltd, Monk Corporation Pvt. Ltd, Mohan Singh Pharmaceuticals Formulations, Monarch Pharmalines(HYD)Pvt Ltd, Mondelz India Foods Ltd, Mondelzz India Foods Ltd, Mondelzz India Foods Ltd, Mondelzz India Foods Pvt Ltd, Monk Automation Pvt Ltd, Monlite Electricals, Morepen Laboratories Ltd., Mosdorfer India Pvt Ltd, Motiff Laboratories Pvt. Ltd. Goa, Motion Drivetronics Pvt Ltd, Mution Metriks Components Pvt Ltd, Mr. Shri K V S, MSN Laboratories Pvt Ltd, MSS India Pvt Ltd, MSS India Pvt.Ltd. – Nashik, MTAR Technologies Pvt Ltd, Mukan Engineering Company, Muktar Automobile Pvt Ltd, Multi Tech Engineers, Multiflo Instruments Pvt. Ltd, Multiquadrant Ind Controls (I) Pvt Ltd, Mumbai Port Trust, Mumbai Waste Management Ltd, Mutual Industries Ltd., My Biotech Pvt Ltd, Mylan Pharmaceuticals Pvt Ltd, N Gandhi & Co, Naanolab India, Nagesh Enterprises, NAI Karanja Naval Station, Naik Seafood Pvt Ltd, (Ratnagiri), Naminath Engineering Pvt. Ltd, Nanda Transformers (India) Pvt Ltd, NASH Robotics & Automation Pvt. Ltd., Nashik Engineering Cluster (S), Nashik Insulation Pvt Ltd, Nasik Metaldust Pvt Ltd, Na Steel Equipment Pvt Ltd, NATCO Pharma Limited, National Bulk Handling Comparition Ltd. Natrote I, Nashik Engineering Ltd. Insufficient Comparition Natrone Ital, Natrone I, Daviney Muttarian J Steel Comparities Ltd., Natrote I, Nashik Engineering Ltd. Natrote I, Nashik Engineering Cluster (S), Nashik Insulation Pvt Ltd, Nasik Metaldust Pvt Ltd, Na Steel Equipment Pvt Ltd, NATCO Pharma Limited, National Bulk Handling Corporation Ltd, National Centre for Disease Control, National Engineering Corporation, National Steel Traders, National Test House, Naval Dockyard, Naval Materials Research Laboratory(NMRL), Navin Corporation, Navin Corporation, Ghatkopar, Navkar Fittings & Forgings Pvt. Ltd, Naveret Publications India Ltd, Navnidh Pharma Research Laboratory(NMRL), Navin Corporation, Navin Corporation, Ghatkopar, Navkar Fittings & Forgings Pvt. Ltd, Naveet Publications India Ltd, Navnidh Pharma Lab, Navraj Enterprises, Navrattan Enterprises, Naxpar Lab Pvt. Ltd, Naxpar Pharma Pvt. Ltd, Nayan Trade Corporation, NBZ Pharma Ltd, Necta Lifesciences Ltd, Neel Beverages Pvt. Ltd., Neela India Pvt. Ltd., Neela Systems Limited, Neelay Metal Industries, Neha Enterprises, Nem Laboratories (P) Ltd., Neon Laboratories Limited, Neotroniks Pvt Ltd, Neptune Enterprises, Netal (India) Ltd, Netel (India) Ltd, New Heaven Steel Ball Co. Pvt. Ltd., New Heaven Steel Ball Corporation Pvt. Ltd., New Krishna Metal Arts, New Ray Engineering Power and Automation System, New Simla Dairy, New Standard Calibration Laboratory, Newtronic Equipment Company Pvt. Ltd., Newtronic Lifecare Equipment Pvt Ltd – Kandivali, Newtronic Lifecare Equipments Pvt Ltd, Nistan Nishotech Systems Pvt Ltd, Nimuter Limited, Neilay Newtronic Lifecare Equipment Pvt. Ltd., Nilkanan Ltd, Nilkanan Ltd, Nilkan Nishotech Systems Pvt Ltd, Nimuts Industries, Nimiter Boisar, Nitha Engineering Works, Nitin Life Sciences Ltd (Paonta Sahib), Niton Valve Industries Pvt. Ltd, Noble Geo Geo Structs, Noble Hospital, Nobtech Enterprise, Nocil Limited, Noor Engg Works, Norris Medicines Ltd, North 16, Nova Integrated Systems Limited, Novartis Health Care Care Pvt Ltd-Hyderabad, Novartis Healthcare Pvt Ltd, Novartis Healthcare Pvt. Ltd (AP), Novartis Healthcare Pvt. Ltd., Novartis Healthcare Pvt. Ltd. (OTC (R & D) India Lab, Novati India Limited, Novateur Electrical & Digital Systems Pvt Ltd, Novel Pharma Distributors, Novell Exports Pvt. Ltd., Novvet Hotel, NRH Electronics & Controls, Offshore Marinetech Pvt. Ltd, Offshore Testing & Insp. Services (I) P.Ltd (S), OHASBAN INDIA, Ohmkar Equipments, Oil Field Supplies, Oil Natural Gas Corporation Limited, Okasa Pvt Ltd, Onsibile Testing & Insp. Services (1) F.Ld (3), OTASDAT INDIA, Ominia Equipments, On Fede Supplies, On Vatura Gas Corporation Limited, Okasa Pvt Ltd, Okasa Pvt Ltd, Omega Pvd Ltd, Omega Rolling Mills, Omega Rolling Mills Pvt. Ltd, Omega Service, Omkar Electricals, Omkar Enterprises, Omkar Industries, Omkar Plastotech Pvt Ltd, Omkar Pvt Insulation Pvt Ltd, Omkar Realtors & Developers Pvt Ltd, Omkar Speciality Chemicals – Ltd, Omkar Omkar Speciality Chemicals Pvt. Ltd., OPAL HVAC Engineers Pvt. Ltd, Optima Weightech Pvt Ltd, Orchid Biomedical Systems, Orchid Chemicals & Pharmaceuticals Omkar Speciality Chemicals Pvt. Ltd., OPAL HVAC Engineers Pvt. Ltd, Optima Weightech Pvt Ltd, Orchid Biomedical Systems, Orchid Chemicals & Pharmaceuticals Ltd., Ordnance Factory, Oriental Export Corporation, Oswal Valves (P) Ltd.(Boisar), Oyster Medisafe Pvt Ltd, P. I. Drugs & Pharmaceuticals Ltd., P. Chhotalal Distributors, Distributors, P. D.Hinduja National Hosp& Medical Reasearch Centre, P.K.Composites Pvt Ltd, P.M. Electro-Auto Pvt. Ltd, Pace Engg. Industries Pvt. Ltd., Paacific Systems, Systems, Pacific Tools Pvt. Ltd., Padmaja Aerobiologicals Pvt Ltd, Pams HVAC Controls, Panacea Biotec Ltd (Delhi), Panacea Biotec Ltd, Panacea Biotec Ltd, Mahape), Ltd.(Mahape), Panchal Automobiles, Panchal Engineering Works, Panchal Roll Forming, Panera Biotec Pvt. Ltd, Parek Integrated Services Pvt Ltd, Paras Pharmaceuticals Ltd., Parazelsus India Pvt. Ltd, Paree Engineers M Pvt Ltd, Parekh Integrated Services Pvt Ltd, Paras Pharmaceuticals Ltd., Parazelsus India Pvt. Ltd, Paree Engineers M Pvt Ltd, Parek Integrated Services Pvt Ltd, Paras Pharmaceuticals Ltd., Paraskan Filter Pvt. Ltd., Parate Agro Private Limited, Parle Elizabeth Tools Pvt. Ltd., Parle Global Technologies Pvt. Ltd., Parle International, Parle Products (P) Ltd, Parea Teble Tools Pvt. Ltd., Parax Lab Pvt. Ltd., Parle Enders Pvt. Ltd., Parch Industries Pvt. Ltd., Pachin Banga Pharmaceutical, Parli Technology Pvt Ltd, PD Life Science Logistics (I) Pvt. Ltd, Perco Valves Pvt. Ltd, Parla Eliche Healthcare Pvt. Ltd, Pentagon Electronics Pvt. Ltd, Pentair Water India Pvt Ltd, Itd. Perfect Circle India Ltd, Perfect Instrument Corporation. Perfect Instrumentation Systems & Controls, Performance Analyst Pvt. Ltd, Pareatir Maent Maenets Technology Pvt Ltd, PDP Life Science Logistics (I) Pvt. Ltd, Peoc Valves Pvt. Ltd, Pellech Healthcare Pvt. Ltd, Pentagon Electronics Pvt. Ltd, Pentair Water India Pvt Ltd, Ltd, Perfect Circle India Ltd, Perfect Instrument Corporation, Perfect Instrumentation Systems & Controls, Performance Analyst Pvt Ltd, Periclave, Permanent Magnets Limited, Pernod Richard India Pvt Ltd, Perpetual Technologies, Perrigo API India Pvt Ltd, Perrigo Laboratories India Pvt Ltd, Pest Control (I) Pvt Ltd (Perrigo Laboratories India Pvt Ltd, Pest Control (I) Pvt Ltd (Bopal), Pest Control (India) Pvt Ltd, Petremath), Pest Parma Force Lab, Pharma Force Laboratories, Pharma Logistics, Pharma Logistics Ltd, (Panchkula), Pharmaffilates Analytics & & Synthetics Pvt. Ltd, Pharmakere Enterprises, Pharma Logistics, Pharma Logistics Ltd, Pharma India Pvt Ltd, Photon Instruments, Physi Chem Material Testing Laboratory, Piano Presitel, PIL Pharmaceuticals Pvt. Ltd, Phosene Instruments, Physi Chem Material Testing Laboratory, Piano Presitel, PIL Pharmaceuticals Pvt. Ltd, Phaschem Instruments, Phaschem Instruments (S), (S), Plastech Thermosensor (S), Plastofab Pvt. Ltd, Poly Products, Poly Weights, Polycab Wires Pvt Ltd, Polydrug Laboratories Pvt. Ltd, Polynova Industries Ltd, Polypeptide



Polypeptide Laboratories Pvt. Ltd, Poonawala Scale Repairing Works, Popular Rubber Products, Portescap India Pvt. Ltd., POSCO-Maharashtra Steel Ltd, Power Control Technology & System Pvt Ltd, Power Electronical, Power Matrix Solutions Pvt

Ltd, Powerdot (S), POWERINST, Powerinst Electromagnets Pvt Ltd, Powermaster Engineers Pvt Ltd, Powertel Engineering Pvt. Ltd, Powertrackanalysers Pvt Ltd, PPG Asian Paints Pvt Ltd, Prabha Engineering Pvt Ltd, Prabhat Dairy Pvt. Ltd., Pradako Fasteners, Pragati Biotech And Life Science, Pragati Electricals Pvt Ltd, Pragati Asian Fanks Progeti Switchgear (Vasai), Pragati Udyog, Praj HiPurity Systems Ltd, Pravio Insteller, Magari Biotenna And Line Societice, Pragari Electricals Per Ltd, Pragati Udyog, Praj HiPurity Systems Ltd, Pravio Instrument & Maintenance Services, Prakash Industries, Prama Instruments Pvt. Ltd, Pranav Engineering, Prasad Enterprises, Prasad Industries, Prasanna Electrotech, Prasanna Electrotech, Prashi Pharma Pvt. Ltd, Prathamesh Electricals & Co., Prayog Prayog Electricals Pvt Ltd, Prayosha Automation, Precistor Pharma Pvt Ltd, Precision Plastic Industries (P-97), Precision Engineers, Precision Engineers & Fabricators India Pvt Ltd, Precision Plastic Industries (P-97), Precision Plastic Industries (P-99), Precision Plastic Industries Pvt. Ltd, Precision Rubber Industries Pvt. Ltd, Pvt. Switchgears PVL Lid, Frijal Heat Exchangers PVL Lid, Prime Entergineers, Prime Anty Knan Hospital, Frinz Engineers, Prism Calibration Centre, Process Precision Instruments, Procter & Gamble Home Products Lid, Proceter & Gamble Home Products PVL Lid, Protet & Gamble Hygiene Health Care Lid, Prof. & Head, Proficient Industries, Progressive Engineering, Progressive Engineering Works, rogressive Engineering Works (Dahisar), Progressive Surface Systems Pvt. Ltd., Prolific Chemical Pvt Lid, Prolific Chemicals Pvt. Ltd., Promas Engineers Pvt Lid, Propack Technologies Pvt Ltd, Prosperity 6 Pharmaceutics, Pro-Tech Engineers & Fab Pvt Ltd, Protego India Pvt. Ltd, Providence Industries (S), PRS Permacel Private Ltd, PS Coatings Pvt Ltd, Prosperity 6 Pharmaceutics, Pro-Tech Engineers & Fab Pvt Ltd, Protego India Pvt. Ltd, Providence Industries (S), PRS Permacel Private Ltd, PS Coatings Pvt Ltd, Prosperity 6 Pharmaceutics, Pro-Tech Engineers & Fab Pvt Ltd, Qualitek Instruments, Quality Calibration Centre, Quality Health Management System, Quality Windings, Qualpro Diagnostics, Quick Industrial Supplier, Quick Industrial Suppliers, R. & Lodwarias P. N. Lodwarias P. N. Edwardier Calibration & Technologies P. N. Edwardie P. M. Edwardier & P. M. Edwardier P. N. Ltd, Gruiter P. D. R. & Kledwarias P. N. Lodwarias P. N. Lodwarias P. N. Edwardier P. N. Ltd, Calibration P. B. V. Kledwarias P. N. Lodwarias P. N. Edwardier P. D. Kledwarias P. N. Edwardier P. M. Edwardier P. M. Edwardier P. N. Ltd, Proteice P. N. Ltd, Suppliers, R.K.Industries, R.N.Laboratories Pvt Ltd. (Gujarat), R.P.Khedkar Calibration & Testing Center, R.R.Powder Coats, Radhakrishna Foodland Pvt. Ltd., Radiological Radiological Precision Labs (India) Pvt Ltd, Rainbow Deco Plas Pvt Ltd, Rainbow Teco Plas Pvt Ltd, Raj Biotec (India) Pvt. Ltd, Raj Instrument Service, Raj Sathyam Analytical Laboratory, Rajason Engineering, Rajasthan Antibiotics Limited, Rajendra Mechanical Ind. Ltd., Rajendra Mechanical Industries Ltd., Rajendra Plastics, Rajeshwar Enterprises, Rajiv Plastics Industries(UNIT-1)-VALSAD, Rajyog Safety & Health Pvt Ltd, Rakyan Beverages Pvt Ltd, Ramelex Testing & Research Institute, Ranbaxy Laboratories Limited, Ranbaxy Laboratories Limited - Bangalore, Ranbaxy Laboratories Limited (Barotiwala), Ranbaxy Laboratories Limited (Malanpur), Ranbaxy Laboratories Limited -R&D Plant (Gurgaon), Ranbaxy Laboratories Ltd (Zirakpur), Ranbaxy Laboratories Ltd (Toansa), Ranbaxy Laboratories Ltd. - Batamandi, Ranbaxy Laboratories Ltd. - Ganguwala(Poanta), Ranbaxy Laboratories Ltd. (Dewas), Ranbaxy Laboratories Ltd. (Mohali), Ra Laboratories Ltd. - Paonta, Rane Elastomer Processors, Raptakos, Brett & Company Ltd, Raptim Research Ltd, Rashtriya Industries, Ratna Pharma Distributor, Ratnagiri Gas Gas & Power Pvt. Ltd, Ratnagiri Krishi Prakriya Sahakari Sanstha Maryadit, Ratnaparkhi Electronics Ind Pvt Ltd, Raut Uni Tech Pvt Ltd, Ravian Life Science Pvt. Ltd, Ravindra Enterprises, Raychem RPG (P) Ltd, Raychem RPG Pvt Ltd(Pune), Raymond Limited, R-Bio Lab Solutions, RCH Orthopaedics, Real Cool, Real Drinks Pvt Ltd, Reckitt Benckiser Healthcare India Ltd, Redilens, Reema Transport Pvt. Ltd., Reinvent Technologies, Relax Pharmaceuticals Pvt.Ltd, Reliable Analytical Laboratories Pvt Ltd (S), Reliance Biopharmaceuticals Pvt Ltd. (Rabale), Reliance Infrastructure Limited, Reliance Life Sciences Pvt.Ltd., Reliance Power, Remi Electrotechnik Ltd, Remi Sales & Engineering Ltd, Research Center Substainable Solutions Pvt Ltd, Retort Chemical Pvt. Ltd. (Plant - I), Retort Chemicals, Retort Chemicals Pvt. Ltd. (PlantII), Sales & Engineering Ltd, Research Center Substainable Solutions Pvt Ltd, Retort Chemical Pvt. Ltd. (Plant - 1), Retort Chemicals, Retort Chemicals, Pvt. Ltd, Ridhill Ltd, Rexotin Pharmaceuticals Pvt. Ltd., Rich Flora, Richter Themis Medicare (India) Pvt. Ltd, Riddhil Plastic, Plastic, Riden SPC, Rinae India Limited, Ring Plus Aqua Ltd, Rishabh Instruments Pvt Ltd, Rishchem Research (P.) Ltd., RLC Engineers Pvt. Ltd., Rochem Separation Systems (India) Pvt. Ltd, Roch Pvt. Etd, Royal Plastic, Riden SPC, Rinae India Limited, Ring Plus Aqua Ltd, Rishabh Instruments Pvt Ltd, Rishichem Research (P.) Ltd., RLC Engineers Pvt. Ltd., Rochem Separation Systems (India) Pvt. Ltd., Rochem Separation Systems (India) Pvt. Ltd., Rochem Separation Systems (India) Pvt. Ltd., Roch Pvt. Electrodes Ltd., Royal Plastic Industries Pvt. Ltd., Rol Electrodes Ltd., So Supersett, S. S. K. Energrinses, S. N. Enterprises, S. N. Enterprises, S. N. Enterprises, S. S. K. Engineering Works(India) Pvt. Ltd., S. V. Scientific, Sacardande Engineers (S), Sachin Precise Tools Service & Calibration Centre, Sachin Precision Tools Service, Saeena Plastic, SA-FORD, Sah Petroleums Limited, Sainey Kirkwood Pvt Ltd, Sai Meena Calibration Lab, Sai Meena Calibration Ld, Sai Centers Kirkwood Pvt Ltd, Sai Service, Su Evergiser, Su Parkania, Sainet Parkaejing, Saini Electrinole & Engineering Co Pvt Ltd, Sai Gee Honsing Electrical & Engineering Co Pvt Ltd, Sai Service, Sevice, Sai Fertilizers and Phosophates Pvt Ltd, Sai Life Sciences Limited, Sai Meena Calibration Lab, Sai Meena Calibration Lab, Sai Meena Calibration Ltd, Sai Service, Su Evergiser, Pvt Ltd, Sai Service, Su Engineering Co Pvt Ltd, Sai Service, Sai Enterprises, Sai Fertilizers and Phosophates Pvt Ltd, Sai Seriee, Sai Meena Calibration Laboratory Pvt Ltd(S), Sai Service, Sai Services Pvt Ltd, Sai Sun Pharma Pvt Ltd, Saifee Hospital, Sainath Packaging, Saini Electrical & Engineering Co Pvt Ltd, Ltd, Saiprasad Engineers Pvt Ltd, Saitech Hvac Project Pvt Ltd, Sajjan India Limited, Sakav Ovens Dryers & Furnaces, Sakav Roasters, Sakra World Hospital, Saksham Technologies Pvt Ltd (New Delhi), Saksham Technologies Pvt. Ltd, Salgaocar Medical Research Centre, Salvi Chemical Industries Ltd, Samanta Organics Pvt. Ltd., Samarth Samarth Enterprises, Samartha Services (S), Sambe Electronics Pvt Ltd, Samrat Packaging, Samriddhi International Inc., Samruddhi Enterprises, Samrudh Packaging Pvt. Oil Technologies Ltd, Saybolt Inspection Services India Pvt Ltd, SBS Testing Studio, Schindler India Pvt Ltd, Schneider Electric India Pvt. Ltd, Schott Kaisha Pvt Ltd, SBS Testing Studio, Schindler India Pvt Ltd, Schneider Electric India Pvt. Ltd, Schott Kaisha Pvt Ltd, SBS Testing Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Shott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt Ltd, Savara Studio, Schindler India Pvt Ltd, Schott Kaisha Pvt L Ltd.-Nan Daman, Scorpion Container (P) Ltd(Sikkim), Scorpion Container (P) Ltd., Scott-Edil Pharmacia Ltd, SCR Elektroniks, Sea Linkers Pvt Ltd, Seasons Polymers Pvt. Pvt. Ltd., Seigneur Medipack, Selec Controls Pvt Ltd, Semikron Electrics Pvt. Ltd, Semikron Electronics Pvt. Ltd, Senator Motors, Sercon Electro Systems Pvt Ltd, Serum Pvt. Ltd., Seigneur Medipack, Selee Controls Pvt Ltd, Semikron Electrics Pvt. Ltd, Semikron Electronics Pvt. Ltd, Serator Motors, Sercon Electro Systems Pvt Ltd, Serum Institute of India Ltd – EOU, Serum Institute of India Ltd (Pune), Service One, Servo - Med Industries Pvt. Ltd., Servotech India Ltd, SES Engineering Works, Sesa Mining Mining Corporation Ltd, Sea Sterlite Limited, Seven Hills Hospital Healthcare Pvt Ltd, SEW Engineering (India) Pvt Ltd, SG Pharma Pvt Ltd, SGS India Pvt. Ltd, Shari Bearings Ball Pvt. Ltd., Shakti Enterprises (Andheri), Shakuntala Wire Industries Pvt Ltd, Shari Valves Pvt Ltd, Sharpoorji Paloonji Co Ltd, Sharada Electricals, Shareen Shareen Auto Pvt Ltd, Sharon Bio Medicine Ltd (Taloja), Sharon Bio-Medicine Ltd., Sharp Tank & Structurals Pvt. Ltd, Sharplex Filters (India) Pvt Ltd, Sharvain Plastic Industry, Shavo Norgen Pvt Ltd, Sheetal Vahan, Shegfried S.V.(India), Sherry Speciality Papers Pvt. Ltd, Shipa Medicare Ltd, Shirke Electron (P) Ltd, Shirpur Gold Refinery Limited, Shirsat Electronics, Shiv Enterprise, Shiva Enterprise, Shiva Parms, Shivpal Vidyut & Engineers, Shives Chenar Fabricators, Shree Connat Engineering Services, Shree Electricals & Engineering Works, Shraman Engineers, Shree Ambika Rubber Products, Shree Chehar Fabricators, Shree Connat Engineering Services, Shree Rubberplast Co. Pvt. Ltd, Shree Sanah Electro Cote Pvt. Ltd, Shree Gankalpa Industries, Shree Satya MineralS Pvt Ltd Shree Savai General Hospital Shree Sidbi Winavak Industries, Shree Gindha Industries, Shree Birtegei Electringer (S) Shreegi Electronies (D) Shree Sidbi Minere Sidbi Corporation, Shree Minere Sidbi Corporation, Shree Birtegei Electronies, Shree Satya MineralS Pvt Ltd, Shree Savai General Hospital Structure, Shree Sidbi Wirters, Shree Sidbi Corporation, Shree Birtegei Electronies (S) Shree Birtegei Electronies Shree Sidbi Corporation, Shree Birtegei Electronies, Shree Sidbi Corporation Shree Brane Corporation, Shree Birtegei Electronies, Shree Sidbi Corporation, Shree Savai General Hospi Radney Technologies, Shree Rubberplast Co. Pvt. Ltd., Shree Samath Electro Cote Pvt. Ltd, Shree Salespack Pvt Ltd, Shree Sankalpa Industries, Shree Salya Minerals Pvt Ltd, Shree Sayaji General Hospital, Shree Siddhi Vinayak Industries, Shree Trading Company, Shreedhar Instruments, Shreeji Enterprises (S), Shreeji Marketing Corporation, Corporation, Shreeji Safetime Appliances Pvt. Ltd. (S), Shreenath Chemicals, Shreesai Enterprises, Shri Bhavani Pharmaceuticals, Shri Ganesh Packaging Company, Shri Hari Industries, Shri Harilal Bhagwati Municipal Genral Hospital, Shri Jai Enterprises, Shri Bhavani Pharmaceuticals, Shri Ganesh Packaging Company, Shri Prestressed Pvt Ltd, Shrinivas Chemical Industries Pvt. Ltd., SHROFF TEXTILES LIMITED – Tarapur, Shubhada Polymers Products Pvt Ltd, Shubham Electronics and Electricals, Shubhline Services, Shweta Winding Services, SI Group India Limited, Siddhakla Engineering, Siddharth Chemicals, Siddharth Material Handling Pvt Ltd, Siddhi Distributors, Siddhi Equipments Pvt Ltd, Sidhivinayak Enterprises, Sidmak Laboratories (I) Pvt. Ltd. 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Centre, Smart I Electronics Systems Pvt. Ltd, Smartech INC, Smartlink Network System Ltd, SMB Corporation of India, SMI Coated Products Pvt. Pvt. Ltd, Smita Industries, Smith & Nephew Healthcare Pvt Ltd, Smith & Sharks Projects (I) Pvt Ltd, Smt. Lilavatibai Podar Senior Secondary High School, SNDT Women's Women's University, Snehsagar Enterprises, Snowbell Machines, Snowbell Machines Pvt Ltd, Soham Analytical Services, Soham Industries, Sohamm Calibration Service, Service, Sohams Foundation Engg. Pvt. Ltd, Solid State Physics Laboratory, Solitaire Honda, Solrex Pharmaceutical Company-Baddi, Solrex Pharmaceuticals Company. Sonak Surface Technologies Pvt Ltd, Sonata Rubber Pvt Ltd. (Vasai), Sonodyne International Pvt Ltd, South India Cashew Corporation, Southern Electronics (Banglore) Pv Pvt Ltd, Sovereign Pharma Pvt. Ltd – Daman, Soverign Pharma P. Ltd., Nani Daman, Sozin Flora Pharma, Spa Pharmaceuticals Pvt. Ltd., Span Diagnostics Ltd., Spanol Chemical Pvt Ltd(Rabale), Spar Coats & Polymers, Sparklet Engineers Pvt. Ltd, Sparkline Welders, Spartan Electricals, Spartan Quality Laboratory, Speciality Polyfilms (I) Chemical Pvt Ltd(Rabale), Spar Coats & Polymers, Sparklet Engineers Pvt. Ltd, Sparkline Welders, Spartan Electricals, Spartan Quality Laboratory, Speciality Polyfilms (I) (I) Pvt. Ltd., Spectris Technologies Pvt Ltd, Spectro Analytical Labs Ltd, Spectro SSA Labs Pvt. Ltd, Spectrum Controls Pvt Ltd, Spectrum Scan Pvt. Ltd., Spink Controls, Spring India Pvt Ltd (Dahisar), Sri Sai Precision Instrumentation & Research Centre, Srinidhi Engineers, SSA Logistic, Staff and Research Society, Stallion DyestIff Pvt Ltd (Boisar), Standard Engineering Corporation, Star Diagnostics Pvt. Ltd., Starlite Components Ltd, Starlite Lightining Ltd, Steelstrong Valves (I) Pvt Ltd, Stelmae Ltd., Stelmee Limited – Virar, Stelmee Ltd., Sterling Hospital, Sterling Rotating Systems Pvt Ltd, Stripco Spring, Struct Geotech Research Laboratories (P) Ltd, Structural Solutions Pvt Ltd, STULZ-CHSPL(INDIA) PVT. LTD, Subal Electronics, Subodh Technologists, Subtran Diagnostics, Suues Solution, Sual Industries Ltd, Sudarshan Sudarshan Chemical Industries Limited, Sudhir Switchgears Pvt. Ltd, Sun Pharma Advanced Research Co. Ltd, Sun Pharma Advanced Research Co. Ltd, Sun Pharma Advanced Research Co. Ltd – Makarpura, Sun Pharma Industries (Samba), Sun Pharma Leberstericies Ltd (*Science*), Sun Pharma Leberstericies Ltd (*Science*), Sun Pharma Industries Ltd (*Science*), Sun Pharma Laboratories Ltd (Gujarat), Sun Pharma Laboratories Ltd (Samba), Sun Pharma Laboratories Ltd (Sikkim Unit 1), Sun Pharma Laboratories Ltd (Jammu), Sun Pharma Medication Pvt Ltd, Sun Phar Sez (Dahej), Sun Pharmaceutical Ind Ltd- Sez Unit, Sun Pharmaceutical Industries (259), Sun Pharmaceutical Industries (259-Dadra), Sun Pharmaceutical Industries Ltd (Barotiwala), Sun Pharmaceutical Industries Ltd (Barotiwa Industries Ltd (Karkhadi), Sun Pharmaceutical Industries Ltd(Dewas), Sun Pharmaceutical Industries Ltd(Malanpur), Sun Pharmaceutical Industries Ltd(Mohali), Sun Pharmaceutical Industries Ltd(Toansa), Sun Pharmaceuticals Industries (214), Sun Pharmaceuticals Industries Ltd (Ahmednagar), Sun Pharmaceuticals Industries Industries Ltd (Ankleshwar), Sun Pharmaceuticals Industries Ltd (Goa), Sun Pharmaceuticals Industries Ltd (Tamilnadu), Sun Pharmaceuticals Industries Ltd(Panoli), Sun Pharma Pharmaceuticals Industries Ltd (Tandlaja), Sun Pharmaceuticals Industries Ltd. – Silvassa, Sun Pharmaceuticals Industries Ltd. (Laboratoricals Industries Ltd. (Laboratoricals), Sun Pharmaceuticals Industries Ltd. (Laboratorical), Sun Pharmaceuticals Industries Itd. (Laboratorical),



Process Equipments, Sunshine Corporation, Sunshine Organics Pvt. Ltd., Sunshine Worldwide Secondary School, Super Automats, Super Super Dairy Farm, Super Enterprises, Super Packs, Super Star Metal Works, Super Tech Supply, Supernova

Electrotech Pvt Ltd, Supertech Exports, Supreme Micronizing, Supreme Petrochem Ltd, Supremo Metal Industries, Suraksha Packnseal Pvt. Ltd., Sure Resistors, Surelock Plastics Pvt Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt. Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt. Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt. Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt. Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt. Ltd, Surgimedik Healthcare, Surgimedik Healthcare India Pvt.Ltd, Suru Chemicals & Pharmaceuticals Pvt.Ltd, Surgimedik Healthcare India Pvt.Ltd, Surgimedik Healthcare Ind Limited, Surya Switchgear, Sushil Auto Products, Sushma Engineers Pvt Ltd, Suspens - Citi Bank Credit Card Exp, Sutaria Brothers, Suvidha Engineers India Ltd. (Andheri), Suvidha Engineers India Pvt Ltd, Suvidha Engineers India Pvt Ltd – Andheri, Suvidha Engineers India Pvt Ltd (GOA), Suvidha Engineers India Pvt Ltd(Kolkata), Suvidha Engineers India Pvt Ltd. (UP), Suvidha Engineers India Pvt. Limited, Suvidha Engineers India Pvt. Ltd (Banglore), Suyash Instrument(S), Suzlon Energy Limited, Suzlon Energy Ltd(Nashik), Suzlon Global Services Ltd, Swani Spice Mills Pvt. Ltd, Swanson Plastics (India) Pvt Ltd, Swaptul Enterprises, Swastik Flexipack Pvt Ltd, Swati Dry Fruits Pvt. Ltd., Swayamsiddha Indl. Prod. Co.Op. Soc. Ltd, Swiss Garnier Genexiaa Sciences, Synbiotics Limited, Syndicate Engineering Industries, Syndicate Wiper Systems Pvt. Ltd, Synergy Techno Support & Solutions LLP, Syngene International Ltd, Syngenta India Ltd, Systematic Calibration Services, Taj Sats Air Catering Limited, Takshasila Hospital Operating Pvt Ltd, Tanay Industries, Tapasya Engineering Works Pvt Ltd, Target Innovations, TAS Power Tek Pvt Ltd., TAS Power Tek Pvt. Ltd. -Nashik, Tata Consultancy Service Limited, Tata Hitachi Construction Machinery Co. Pvt. Ltd., TATA Motors Limited, Tata Motors Ltd (CRS), Tata Motors Ltd (Pune), Tata Power Company Limited, Tatsuno India Pvt Ltd, TCR Engineering Services Pvt Ltd, TE Connectivity India Pvt Ltd, Team CNG Pvt. Ltd, Technical Resources, Technocrats Power Company Limited, Tatsuno India PVI Lid, TCR Engineering Services PVI Lid, Te Contectivity India PVI Lid, Technofour Combines PVI Lid, Technosys Control Solutions, Technovision Instruments Solutions PVI Lid, Technofour Components PVI Lid, Technosys Control Solutions, Technovision Instruments Solutions PVI Lid, Technofour Components PVI Lid, Teknocrist Controls Systems (I) PVI Lid, Teknoris India PVI Lid, Teknocrist Controls Systems (I) PVI Lid, Teknoris India PVI Lid, Teknoris India PVI Lid, Technofour Components PVI India (S), The Bombay Textile Research Association, The Freyssinet Prestressed Concrete Co Ltd, The Lalit Golf & SPA Resort, The Motwane Manufacturing Company Pvt Ltd, The Muthoof Skychef, The Rubber Products Ltd, The Synthetic & Art Silk Mills Research Association, Thea Tex Healthcare (India) Pvt Ltd, Thempark Design House, Them is Medicare Limited, Therapeutics Chemical Research Corporation, Thermax Limited, Therapeutics Chemical Research Association, These Scientific Ladia Pvt Ltd, Themepark Design House, Themis Medicare Limited, Therapeutics Chemical Research Corporation, Thermax Limited, Thermo Fisher Scientific Ladia Pvt Ltd, Thirden Pvt Ltd, Thyssenkrupp Electrical Steel India Pvt Ltd, Tien Yuan India Pvt Ltd, Tijare Associates, Tijare Engineers & Consultants Pvt Ltd, TIL Limited, Tinita Engineering Pvt Ltd, Tirupati Engineering, Tisun-Edes Solar (India) Pvt Ltd, TIT -BIT Foods (India) Pvt. Ltd., TLR India, Top Tech Biomedicals, Topworth Pipes & Tubes Pvt Ltd, TOROTRANS R, Torque Pharmaceuticals Pvt Ltd. (Derabassi), Trans Electrice, Trans Tech Turnkey Pvt. Ltd., Trans Thene Creek Waste Management Association, Transael Measurement of Perfection, Transpower India Electronics Pvt. Ltd., Transweigh (I) Ltd, Tree Top Enterprises, Trinity Ventures, Trio Metrological Laboratory (S), Triochem Products Ltd., Trishul Equipment, Tritech Corporation, TSA Process Equipments Pvt Ltd, TTE Engineers (Bombay) Pvt. Ltd., TTL Technologies Pvt Ltd (S), Tubefit Engineers, Tulip Diagnostics (P.) Ltd., Tulsa Gas Technologies India Pvt Ltd, Turbocam (India) Pvt Ltd, Tushar Industrial Corporation, TUV India Private Limited, TUV SUD South Asia Pvt. Ltd, Twilight Litaka Pharma Ltd., Tyco Fire Protection Products, Tyco Safety Products (I) Pvt Ltd, Tyre Soles Ind. Pvt. Ltd., U Med Laboratories, Ukay Remedies Pvt. 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(Daman), Uttam Scientific Instruments, V V F (India) Ltd, V V F Ltd, V.K. Pump Industries Pvt Ltd, Valibav Enterprises, Vaibhavi Enterprises, Vaidya Group of Industries, Vako Seals Pvt. Ltd, Valifit Engineers, Valvoline Cummins Limited, Valvoline Cummins Pvt Ver Lid, Vanita V Enterprises, Vandya Group of Industres, Vandya Group o II), Victory Luminaries (Works-I), Vidarbha Industries Power Ltd, Vidyut Udyog, Vifor India Pvt. Ltd., Vifor Pharma Pvt. Ltd., Vifore India, Vighneshwar Airconditioning Pvt Ltd, Vinayak Corporation, Vineeth Chemicals, Vineeth Precious Catalysts Pvt Ltd, Vinjoh Healthcare Pvt Ltd, Vintage Hospital & Medical Research Centre Pvt Ltd, Vintech Enterprises, VIP Industries Limited, Virchow Biotech Pvt. Ltd., Vishal Electro Industries Pvt Ltd, Vishal Industries, Vishwakarma Engineering, Vision Safety India, Visionary Technologies, Vista Packaging Pvt. Ltd., Vista Packaging Pvt.Ltd., Vista Packings Pvt. Ltd, Vital Diagnostics Pvt Ltd, Vital Healthcare Pvt. Ltd., Vital Neutraceutical Pvt Ltd, Vitech Service, Vitek Medisystems, Vitronics (India), Vivajay Brushes (Goa), Vivid Metrawatt, VKL Seasoning Pvt Ltd, VKR Industries, VNS Industries Pvt. Ltd, Volkswagen India Private Limited, Voltas Limited, VVF India Ltd(Daman), VWR Lab Products Pvt Ltd, Wam India Pvt Ltd, Wahoury Ltd, Warkembiotech Pvt Ltd, Watson Pharma Ltd. Goa Unit-IV, Watson Pharma Pvt Ltd – Belapur, Watson Pharma Pvt. Ltd - Belapur CRO, Watson Pharma Pvt. Ltd (N-15), Warkembiotech Pvt Ltd, Watson Pharma Ltd. Goa Unit-IV, Watson Pharma Pvt Ltd – Belapur, Watson Pharma Pvt. Ltd - Belapur CRO, Watson Pharma Pvt. Ltd (N-15), Watson Pharma Pvt. Ltd. Ambernath K7, Weighup Instruments, Weiss Technik India Pvt Ltd, Welex Laboratorics Pvt. Ltd., Welspun Syntex Ltd., West Coast Shipyard, Western India Shipyard, Western Refrigeration Pvt. Ltd., Western Regional Instrumentation Centre, Western Steel Drums Pvt. Ltd., Wheels India Ltd, Whirloool of India Ltd, Wibro Construction Company, Wimpy Electronics Pvt. Ltd., Wind World (India) Limited, Windlas Healtheare (P) Ltd, Winmer Technologies Pvt Ltd, Winner Electronics, WMI Cranes Ltd, Wockhardt Ltd. (B-152), Wockhardt Ltd. (L1), Wockhardt Ltd. (Rasik), Wockhardt Ltd. (Bandra), Wockhardt Ltd. (B-152), Wockhardt Ltd. (L1), Wockhardt Ltd. (L3), Wockhardt Ltd. (L4), Yash Center(Aurangabad), Wool Research Association, Yaahi Campro, Yak Group, Yaksh Technologies, Yapp India Automotive Systems Pvt Ltd, Zazen Pharma Pvt. Ltd, Zealtek Calibration Laboratory, Zeiss Pharmaceuticals Pvt. Ltd, Zoen Pharma Pvt Ltd, Gujarat), Zenith Industrial Rubber Products Pvt. Ltd, Zephyr Biomedical, Zephyr Biomedicals (Goa), Zoetis Pharmaceutical Research Pvt Ltd, Zoventus Healtheare Ltd, Zydus Takeda Healtheare Pvt Ltd, ZYDUS HEALTHCARE, Zydus Nycomed Healtheare Pvt. Ltd, Zylog Plastalloys Pvt Ltd, Zytex Corporation Zvtex Corporation





QUALITY OBJECTIVES

Our quality objectives are:

- On-time completion of calibrations in 95% of cases.
- Error-free reporting within the committed time in 95 % cases.
- Assuring quality of the calibration results through satisfactory participation in Inter Laboratory Comparison for all Calibration Parameters Once in every 4 years.
- Acceptance criteria for supplier evaluation to be 70 % minimum.
- Customer satisfaction index to be 80% minimum
- Increase in customer base by 10% every year

QUALITY POLICY

We, at AUTOCAL SOLUTIONS PVT. LTD are committed to:

- Provide calibration services as per our documented Quality Management System laid down in line with ISO/IEC 17025:2005 and the requirements of NABL Specific Criteria to the satisfaction of our Customers.
- Assure Reliability of our calibration result by ensuring traceability to National or International standards.
- Train all members of the Laboratory to exhibit competency while performing calibrations and to encourage them to maintain impartiality, integrity and a high degree of credibility in their work.
- Improve the quality of our services and continually improve the effectiveness of management system.
- Ensure good professional laboratory practices are established and followed.
- Ensure that all personnel concerned with calibration activities within laboratory familiarize themselves with the Quality documentation and implement the policies and procedures in their work.



BRIEF ABOUT AUTOCAL TRAINING MODULE

Autocal has conducted several training programs, in- house and at customer's premises.

ASPL offers training courses to help individuals gain the skills that they require in the field of Measurement and Calibration.

These training programs are also tailor made as per customer's needs at ASPL offices or at customer's site on request. The instructor is an expert in their field and has extensive experience of more than 17 years in measurement and calibration.

Understanding the principles of measurement and calibration can lead to better decisions on product purchasing, reduced need for expensive technical support and reduced operational mistakes with expensive consequences.

We have already conducted Calibration Metrology awareness training, ISO/IEC: 17025:2005, measurement uncertainty training as per NABL 141 for below clients:

- 🗍 Jubiliant Organosys Ltd
- Regent Drugs Ltd (Teva Group)
- 🚽 Sun Pharmaceuticals industries Ltd
- **J**.Y. Patil College of Engineering (Pune)
- 🚽 L&T, Pune
- 🕌 Western Pharma, Goa
- 🚽 Johnson & Johnson, Aurangabad
- HISEB Nashik (Testing division)
- 4 Aditya Vidyut Appliances Pvt. Ltd.









CONSULTANCY SERVICES

We are consulting with experienced firm <u>B. G. Kini</u> for below services:</u>

- Training-All your training needs will be covered by ASPL Professional and Industry Experts staff.
- Audit- Whether its Pharmaceutical- API, GMP, GLP or Oncology Audit Autocal shall nurture you to successfully qualify your audit.
 - Pharma API
 - GMP GLP
 - Oncology
- Trouble Shooting- ASPL provides the right methods for all your trouble shooting whether it's Quality, Pharma System, Out of Specification/ Out of Trend, Deviation Management, Change Control Management, Quality Risk Management & Root Cause Analysis.
 - Quality Pharma System
 - Out of Space/Out of Trend
 - Deviation Management
 - Change Control Management
 - Quality Risk Management
 - Root Cause Analysis
- > Inspection-Inspection of Pharmaceutical Plants.

Consultancy services as per ISO/IEC 17025:2005, ISO 15189:2012

We are extending consulting services in set up of new calibration lab and guidance to get NABL accreditation for calibration & testing laboratories according to ISO/IEC 17025:2005 in which we cover following points:

- > Initial Gap Analysis of your existing system.
- > Help in getting your equipment's calibrated from NABL Laboratory.
- > Preparation of quality manual and other quality system related documents.
- > Preparation of standard operating procedures.
- Planning and conducting of internal audit.
- Help in conducting the Proficiency Testing and ILC
- > Finalizing the NABL Testing calibration scope & application to NABL.
- > Guidance for the readiness for the pre-assessment.
- > Guidance to the closure of the pre-assessment, non-conformities.
- > Help in getting prepared for final audit.
- Guidance for the closure of non-conformities.





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Providing services for Calibration, Validation & Testing