



INTERNATIONAL  
ACCREDITATION  
SERVICE®

# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **ACCURA CALSERV PTE LTD**

NO.16, AYER RAJAH CRESCENT, # 04-05 D, TEMPCO TECHNOMINIUM  
SINGAPORE 139965, SINGAPORE

### **Calibration Laboratory CL-262**

has met the requirements of AC204, *IAS Accreditation Criteria for Calibration Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date July 23, 2024



A handwritten signature in black ink, reading "Raj Nathan".

**President**

Visit [www.iasonline.org](http://www.iasonline.org) for current accreditation information.

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

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## ACCURA CALSERV PTE LTD

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*Accredited to ISO/IEC 17025:2017*

*Effective Date July 23, 2024*

### CALIBRATION AND MEASUREMENT CAPABILITY (CMC)\*

| MEASURED<br>QUANTITY or DEVICE<br>TYPE CALIBRATED                                              | RANGE                                                                                                                                                                                                                                                                | UNCERTAINTY <sup>1,2</sup><br>( $\pm$ )                                                                                                                      | CALIBRATION METHOD<br>OR PROCEDURE,<br>STANDARD EQUIPMENT<br>(OPTIONAL) |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <i>Mechanical</i>                                                                              |                                                                                                                                                                                                                                                                      |                                                                                                                                                              |                                                                         |
| Pressure Instruments <sup>3</sup> –<br>Differential / Level (DP)<br>(Lab and Site)             | $\pm$ (5 Pa to 2500 Pa) (d)<br>$\pm$ (2500 Pa to 10000 Pa) (d)<br>$\pm$ (10000 Pa to 15000 Pa) (d)<br><br>$\pm$ (0.15 bar to 1 bar) (d)<br>$\pm$ (1 bar to 2 bar) (d)<br>$\pm$ (2 bar to 10 bar) (d)<br>$\pm$ (10 bar to 15 bar) (d)<br>$\pm$ (15 bar to 20 bar) (d) | 0.5 Pa (d)<br>1.2 Pa (d)<br>14 Pa (d)<br><br>0.0003 bar (d)<br>0.0007 bar (d)<br>0.0032 bar (d)<br>0.0076 bar (d)<br>0.0085 bar (d)                          | Calibration Procedure<br>ACS-CP-PR-03 /<br>ACS-CP-SPR-03                |
| Pressure & Vacuum<br>Instruments <sup>3</sup> –<br>Pressure / Vacuum / Level<br>(Lab and Site) | -0.95 bar to 0 bar<br>0 mbar to 25 mbar<br>25 mbar to 100 mbar<br>100 mbar to 150 mbar<br>150 mbar to 1 bar<br>1 bar to 2 bar<br>2 bar to 10 bar<br>10 bar to 15 bar<br>15 bar to 20 bar<br>20 bar to 70 bar<br>70 bar to 700 bar<br>700 bar to 1000 bar             | 0.5 mbar<br>0.005 mbar<br>0.012 mbar<br>0.14 mbar<br>0.0003 bar<br>0.0007 bar<br>0.0032 bar<br>0.0076 bar<br>0.0085 bar<br>0.045 bar<br>0.45 bar<br>0.65 bar | Calibration Procedure<br>ACS-CP-PR-05 /<br>ACS-CP-SPR-05                |
| Pressure Instruments <sup>3</sup> –<br>Absolute<br>(Lab and Site)                              | 40 mbar (a) to 2 bar (a)<br>2 bar (a) to 20 bar (a)                                                                                                                                                                                                                  | 0.82 mbar (a)<br>12 mbar (a)                                                                                                                                 | Calibration Procedure<br>ACS-CP-PR-04 /<br>ACS-CP-SPR-04                |

\* If information in this CMC is presented in non-SI units, the conversion factors stated in NIST Special Publication 811 "Guide for the Use of the International System of Units (SI)" apply.

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| MEASURED<br>QUANTITY or DEVICE<br>TYPE CALIBRATED                                                                                                                                                                                                                                                                                     | RANGE                                                                                      | UNCERTAINTY <sup>1,2</sup><br>(±)                        | CALIBRATION METHOD<br>OR PROCEDURE,<br>STANDARD EQUIPMENT<br>(OPTIONAL) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------------------|
| Vacuum Instruments <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                                                                     | -0.95 bar to -0.03 bar (g)                                                                 | 0.03 % (g)                                               | Calibration Procedure<br>ACS-CP-PR-01 /<br>ACS-CP-SPR-01                |
| Pressure Instruments –<br>Pneumatic <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                                                    | 0.2 bar to 35 bar (g)                                                                      | 0.03 % (g)                                               | Calibration Procedure<br>ACS-CP-PR-01 /<br>ACS-CP-SPR-01                |
| Pressure Instruments –<br>Hydraulic <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                                                    | 30 psi to 15000 psi (g)<br>15000 psi to 40000 psi (g)                                      | 0.03 % (g)<br>0.05 % (g)                                 | Calibration Procedure<br>ACS-CP-PR-02 /<br>ACS-CP-SPR-02                |
| Torque Wrenches /<br>Meters / Multipliers<br>(Lab only)                                                                                                                                                                                                                                                                               | 100 N·m to 300 N·m<br>300 N·m to 2000 N·m<br>2000 N·m to 3000 N·m                          | 0.96 %<br>0.71 %<br>0.59 %                               | Calibration Procedure<br>ACS-CP-TO-01                                   |
| <b>Thermal</b>                                                                                                                                                                                                                                                                                                                        |                                                                                            |                                                          |                                                                         |
| RTD <sup>3</sup> / Thermocouple<br>Sensors with or without<br>Indicator <sup>3</sup> / Controller <sup>3</sup> ,<br>Capillary Thermometer <sup>3</sup> ,<br>Data Logger with Sensor <sup>3</sup> ,<br>Temperature Gauge <sup>3</sup> ,<br>Temperature Switch <sup>3</sup> ,<br>Temperature Transmitter <sup>3</sup><br>(Lab and Site) | -80 °C to 230 °C<br>230 °C to 650 °C                                                       | 0.04 °C<br>0.05 °C                                       | Calibration Procedure<br>ACS-CP-TE-01 /<br>ACS-CP-STE-01                |
| Temperature Calibrator <sup>3</sup> /<br>Bath <sup>3</sup> / Chamber <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                   | -80 °C to 90 °C<br>90 °C to 650 °C                                                         | 0.06 °C<br>0.07 °C                                       | Calibration Procedure<br>ACS-CP-TE-03 /<br>ACS-CP-STE-03                |
| Temperature Oven <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                                                                       | 30 °C to 100 °C<br>100 °C to 300 °C<br>300 °C to 500 °C                                    | 0.9 °C to 1.2 °C<br>1.2 °C to 2.4 °C<br>2.4 °C to 3.5 °C |                                                                         |
| Humidity Instruments<br>(Fixed Points) <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                                                 | 11.3 %RH @ 23 °C<br>35 %RH @ 23 °C<br>50 %RH @ 23 °C<br>60 %RH @ 23 °C<br>75.3 %RH @ 23 °C | 0.3 %RH<br>0.4 %RH<br>0.6 %RH<br>0.6 %RH<br>0.7 %RH      | Calibration Procedure<br>ACS-CP-HU-01 /<br>ACS-CP-SHU-01                |
| Temperature Sensors<br>incorporated in Humidity<br>Instruments <sup>3</sup><br>(Lab and Site)                                                                                                                                                                                                                                         | 10 °C to 50 °C                                                                             | 0.05 °C                                                  | Calibration Procedure<br>ACS-CP-HU-02 /<br>ACS-CP-SHU-02                |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Temperature and<br>Humidity Instruments <sup>3</sup><br>(Lab and Site)                                                                                      | 10 %RH<br>@ 15 °C to 40 °C<br><br>>10 %RH to 50 %RH<br>@ 15 °C to 40 °C<br><br>>50 %RH to 75 %RH<br>@ 15 °C to 40 °C<br><br>15 °C to 40 °C<br>@ 10 %RH to 75 %RH              | 0.7 %RH<br><br>0.87 %RH<br><br>0.94 %RH<br><br>0.16 °C                                          | Calibration Procedure<br>ACS-CP-HU-02 /<br>ACS-CP-SHU-02                |
| Non-contact Thermometer<br>/ Pyrometer / Thermal<br>Imager<br>(Lab only)                                                                                    | 50 °C to 200 °C<br>200 °C to 525 °C<br>525 °C to 900 °C                                                                                                                       | 2.2 °C<br>3.9 °C<br>5.1 °C                                                                      | Calibration Procedure<br>ACS-CP-IN-01                                   |
| <b>Electrical – DC/LF</b>                                                                                                                                   |                                                                                                                                                                               |                                                                                                 |                                                                         |
| <b>Measuring Instruments</b>                                                                                                                                |                                                                                                                                                                               |                                                                                                 |                                                                         |
| Temperature Measuring<br>Instruments <sup>3</sup> / Controllers <sup>3</sup><br>/ Transmitters <sup>3</sup><br>(RTD)<br>Simulation Method<br>(Lab and Site) | -200 °C to -100 °C<br>-100 °C to 0 °C<br>0 °C to 50 °C<br>50 °C to 100 °C<br>100 °C to 150 °C<br>150 °C to 200 °C<br>200 °C to 400 °C<br>400 °C to 600 °C<br>600 °C to 850 °C | 0.02 °C<br>0.03 °C<br>0.04 °C<br>0.05 °C<br>0.06 °C<br>0.07 °C<br>0.09 °C<br>0.13 °C<br>0.18 °C | Calibration Procedure<br>ACS-CP-TE-02 /<br>ACS-CP-STE-02                |
| Temperature Measuring<br>Instruments <sup>3</sup> / Controllers <sup>3</sup><br>/ Transmitters <sup>3</sup><br>(T/C)<br>(Lab and Site)                      |                                                                                                                                                                               |                                                                                                 | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| K Type                                                                                                                                                      | -200 °C to -140 °C<br>-140 °C to -100 °C<br>-100 °C to 100 °C<br>100 °C to 900 °C<br>900 °C to 1370 °C                                                                        | 0.32 °C<br>0.2 °C<br>0.16 °C<br>0.25 °C<br>0.31 °C                                              |                                                                         |
| J Type                                                                                                                                                      | -150 °C to -100 °C<br>-100 °C to -30 °C<br>-30 °C to 150 °C<br>150 °C to 760 °C<br>760 °C to 1200 °C                                                                          | 0.28 °C<br>0.15 °C<br>0.13 °C<br>0.18 °C<br>0.23 °C                                             |                                                                         |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------|
| Temperature Measuring<br>Instruments <sup>3</sup> / Controllers <sup>3</sup><br>/ Transmitters <sup>3</sup><br>(T/C)<br>(Lab and Site)<br>(continued) |                                                                                                   |                                                     | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| T Type                                                                                                                                                | -200 °C to -150 °C<br>-150 °C to 0 °C<br>0 °C to 120 °C<br>120 °C to 400 °C                       | 0.72 °C<br>0.14 °C<br>0.13 °C<br>0.15 °C            |                                                                         |
| S Type                                                                                                                                                | -20 °C to 250 °C<br>250 °C to 1000 °C<br>1000 °C to 1700 °C                                       | 0.93 °C<br>0.53 °C<br>0.64 °C                       |                                                                         |
| R Type                                                                                                                                                | -20 °C to 250 °C<br>250 °C to 1000 °C<br>1000 °C to 1700 °C                                       | 0.93 °C<br>0.53 °C<br>0.64 °C                       |                                                                         |
| E Type                                                                                                                                                | 0 °C to 350 °C<br>350 °C to 650 °C<br>650 °C to 800 °C                                            | 0.13 °C<br>0.16 °C<br>0.19 °C                       |                                                                         |
| N Type                                                                                                                                                | -200 °C to -100 °C<br>-100 °C to -25 °C<br>-25 °C to 120 °C<br>120 °C to 410 °C<br>410 to 1300 °C | 0.51 °C<br>0.25 °C<br>0.21 °C<br>0.20 °C<br>0.29 °C |                                                                         |
| B Type                                                                                                                                                | 600 °C to 800 °C<br>800 °C to 1000 °C<br>1000 °C to 1800 °C                                       | 0.85 °C<br>0.76 °C<br>0.65 °C                       |                                                                         |
| Temperature Measuring<br>Instruments <sup>3</sup><br>RTD <sup>3</sup><br>(Lab and Site)                                                               | -100 °C to 0 °C<br>0 °C to 750 °C                                                                 | 0.39 °C<br>0.43 °C                                  | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| DC Voltage <sup>3</sup><br>(Lab and Site)                                                                                                             | 0 mV to 100 mV<br>100 mV to 200 mV<br>200 mV to 1 V<br>1 V to 10 V<br>10 V to 1000 V              | 0.007 %<br>0.005 %<br>0.004 %<br>0.003 %<br>0.004 % | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |

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|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------------------------------------|
| AC Voltage <sup>3</sup><br>(Lab and Site)                         |                                                                                                      |                                                              | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| @ 40 Hz                                                           | 20 mV to 200 V                                                                                       | 0.53 % to 0.099 %                                            |                                                                         |
| @ 50 Hz                                                           | 20 mV to 200 mV<br>200 mV to 20 V<br>20 V to 200 V<br>200 V to 1000 V                                | 0.19 % to 0.061 %<br>0.058 %<br>0.099 %<br>0.097 %           | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| @ 1 kHz                                                           | 20 mV to 100 mV<br>100 mV to 100 V<br>100 V to 300 V<br>300 V to 1000 V                              | 0.15 %<br>0.16 %<br>0.21 %<br>0.19 %                         |                                                                         |
| @ 50 kHz                                                          | 100 mV to 1V<br>1 V to 10 V<br>10 V to 100 V<br>100 V to 300 V                                       | 0.91 % to 0.06 %<br>0.66 %<br>0.16 %<br>0.21 %               |                                                                         |
| DC Current <sup>3</sup><br>(Lab and Site)                         | 0 µA to 100 µA<br>100 µA to 10 mA<br>10 mA to 100 mA<br>100 mA to 1 A<br>1 A to 20 A<br>20 A to 30 A | 0.05 %<br>0.01 %<br>0.013 %<br>0.021 %<br>0.061 %<br>0.054 % | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| DC Current <sup>3</sup> (Using<br>Current Coil)<br>(Lab and Site) | 30 A to 60 A<br>60 A to 300 A<br>300 A to 1500 A                                                     | 0.46 %<br>0.59 %<br>0.30 %                                   |                                                                         |
| AC Current <sup>3</sup><br>(Lab and Site)                         |                                                                                                      |                                                              | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| @ 10 Hz                                                           | 25 µA to 100 µA<br>100 µA to 1 A                                                                     | 1.4 % to 0.52 %<br>0.39 %                                    |                                                                         |
| @ 50 Hz                                                           | 200 µA to 30 A                                                                                       | 0.26 % to 0.09 %                                             |                                                                         |
| @ 1 kHz                                                           | 100 µA<br>100 mA<br>30 A                                                                             | 1.2 %<br>0.79 %<br>0.37 %                                    |                                                                         |
| @ 10 kHz                                                          | 100 µA<br>100 mA<br>1 A                                                                              | 1.2 %<br>0.79 %<br>0.81 %                                    |                                                                         |

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|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| AC Current @ 50 Hz <sup>3</sup><br>(Using Current Coil)<br>(Lab and Site) | 30 A to 60 A<br>60 A to 300 A<br>300 A to 1500 A                                                                                                                                                                          | 0.46 %<br>0.59 %<br>0.30 %                                                                                                                                                                     |                                                                         |
| Frequency <sup>3</sup><br>(Lab and Site)                                  | 10 Hz to 10 MHz                                                                                                                                                                                                           | 0.0003 % to<br>0.0002 %                                                                                                                                                                        | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| Resistance <sup>3</sup><br>(Lab and Site)                                 | Dial x 0.01 Ω<br>Dial x 0.1 Ω<br>Dial x 1 Ω<br>Dial x 10 Ω<br>Dial x 100 Ω<br>Dial x 1 kΩ<br>Dial x 10 kΩ<br><br>0.1 Ω<br>0.28 Ω<br>1 Ω<br>10 Ω<br>100 Ω<br>1 kΩ<br>10 kΩ<br>100 kΩ<br>1 MΩ<br>10 MΩ<br>100 MΩ<br>1000 MΩ | 1.2 %<br>0.24 %<br>0.024 %<br>0.024 %<br>0.024 %<br>0.024 %<br>0.024 %<br><br>2.1 %<br>2.1 %<br>2.1 %<br>0.01 %<br>0.01 %<br>0.01 %<br>0.01 %<br>0.01 %<br>0.02 %<br>0.05 %<br>0.58 %<br>1.2 % | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |
| Insulation Resistance <sup>3</sup><br>(Lab and Site)                      | Dial x 0.1 MΩ<br>Dial x 1 MΩ<br>Dial x 10 MΩ<br>Dial x 100 MΩ<br>Dial x 1 GΩ<br>Dial x 10 GΩ<br>200 GΩ<br>500 GΩ                                                                                                          | 2.3 %<br>2.3 %<br>3.5 %<br>3.5 %<br>3.5 %<br>5.8 %<br>6.5 %<br>6.5 %                                                                                                                           | Calibration Procedure<br>ACS-CP-EL-03/<br>ACS-CP-SEL-03                 |
| Capacitance <sup>3</sup><br>(Lab and Site)                                | 1 nF<br>10 nF<br>20 nF<br>50 nF<br>100 nF<br>1 μF<br>10 μF                                                                                                                                                                | 0.34 %<br>0.35 %<br>0.49 %<br>1.0 %<br>0.31 %<br>0.46 %<br>0.73 %                                                                                                                              | Calibration Procedure<br>ACS-CP-EL-01 /<br>ACS-CP-SEL-01                |

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|-----------------------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------------------------|
| <b>Electrical – DC/LF</b>                                                   |                                                     |                                                     |                                                                         |
| <b>Source/generating Instruments</b>                                        |                                                     |                                                     |                                                                         |
| Temperature Sourcing<br>Instruments <sup>3</sup><br>(T/C)<br>(Lab and Site) |                                                     |                                                     | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| K Type                                                                      | -100 °C to 1360 °C                                  | 1.4 °C to 0.95 °C                                   |                                                                         |
| J Type                                                                      | -100 °C to 1190 °C                                  | 1.2 °C to 0.81 °C                                   |                                                                         |
| R Type                                                                      | 0 °C to 1700 °C                                     | 3.0 °C to 1.9 °C                                    |                                                                         |
| S Type                                                                      | 0 °C to 1700 °C                                     | 3.0 °C to 2.0 °C                                    |                                                                         |
| T Type                                                                      | -100 °C to 400 °C                                   | 1.2 °C to 0.98 °C                                   |                                                                         |
| Temperature Sourcing<br>Instruments <sup>3</sup><br>(RTD)<br>(Lab and Site) | -100 °C to 800 °C                                   | 0.39 °C to 0.47 °C                                  | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| DC Voltage <sup>3</sup><br>(Lab and Site)                                   | 0 mV to 1000 V                                      | 0.0009 %                                            | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| AC Voltage <sup>3</sup><br>(Lab and Site)                                   |                                                     |                                                     | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| @ 50 Hz ~ 1 kHz                                                             | 100 mV to 100 V<br>100 V to 700 V                   | 0.081 %<br>0.12 %                                   |                                                                         |
| DC Current <sup>3</sup><br>(Lab and Site)                                   | 0 µA to 100 µA<br>100 µA to 100 mA<br>100 mA to 1 A | 0.003 %<br>0.003 % to 0.082 %<br>0.082 % to 0.014 % | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| AC Current <sup>3</sup><br>(Lab and Site)                                   |                                                     |                                                     | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| @ 50 Hz ~ 1 kHz                                                             | 1 A to 2 A                                          | 0.26 % to 0.28 %                                    |                                                                         |
| Frequency <sup>3</sup><br>(Lab and Site)                                    | 1 Hz to 10 MHz                                      | 0.06 % to 0.012 %                                   | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |
| Resistance <sup>3</sup><br>(Lab and Site)                                   | 0.1 Ω to 1 MΩ<br>1 MΩ to 10 MΩ                      | 0.002 %<br>0.007 %                                  | Calibration Procedure<br>ACS-CP-EL-02 /<br>ACS-CP-SEL-02                |

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|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Chemical/Gas</b>                                                                    |                                                                                                                 |                                                                                                                     |                                                                         |
| pH Instruments <sup>3</sup><br>(Lab and Site)                                          | 2.000 pH<br>4.005 pH<br>7.000 pH<br>10.001 pH<br>12.000 pH                                                      | 0.02 pH<br>0.01 pH<br>0.01 pH<br>0.01 pH<br>0.02 pH                                                                 | Calibration Procedure<br>ACS-CP-CH-03 /<br>ACS-CP-SCH-03                |
| Conductivity Instruments <sup>3</sup><br>(Lab and Site)                                | 10 µS/cm<br>100 µS/cm<br>300 µS/cm<br>500 µS/cm<br>1413 µS/cm<br>10 mS/cm<br>20 mS/cm<br>100 mS/cm<br>200 mS/cm | 0.1 µS/cm<br>0.7 µS/cm<br>1.8 µS/cm<br>2.0 µS/cm<br>4.6 µS/cm<br>0.04 mS/cm<br>0.08 mS/cm<br>0.3 mS/cm<br>2.0 mS/cm | Calibration Procedure<br>ACS-CP-CH-01 /<br>ACS-CP-SCH-01                |
| TDS Instruments <sup>3</sup><br>(Lab and Site)                                         | 6.64 ppm<br>66 ppm<br>200 ppm<br>337 ppm<br>940 ppm<br>6.65 ppt<br>13.42 ppt<br>67.2 ppt<br>133 ppt             | 1.1 %<br>0.71 %<br>0.6 %<br>0.4 %<br>0.32 %<br>0.4 %<br>0.4 %<br>0.3 %<br>0.99 %                                    | Calibration Procedure<br>ACS-CP-CH-04 /<br>ACS-CP-SCH-04                |
| Total Suspended Solids<br>Instruments <sup>3</sup><br>(Lab and Site)                   | 1 mg/L<br>5 mg/L<br>10 mg/L<br>20 mg/L<br>50 mg/L<br>100 mg/L<br>200 mg/L                                       | 0.09 mg/L<br>0.37 mg/L<br>0.61 mg/L<br>1.7 mg/L<br>3.8 mg/L<br>7.2 mg/L<br>14 mg/L                                  | Calibration Procedure<br>ACS-CP-CH-06 /<br>ACS-CP-SCH-06                |
| Turbidity Instruments <sup>3</sup><br>(Lab and Site)                                   | 5 NTU<br>50 NTU<br>100 NTU                                                                                      | 0.37 NTU<br>3.7 NTU<br>7.4 NTU                                                                                      | Calibration Procedure<br>ACS-CP-CH-07 /<br>ACS-CP-SCH-07                |
| Oxidation - Reduction<br>Potential (ORP)<br>instruments <sup>3</sup><br>(Lab and Site) | 200 mV<br>476 mV                                                                                                | 3.1 mV<br>4.4 mV                                                                                                    | Calibration Procedure<br>ACS-CP-CH-02 /<br>ACS-CP-SCH-02                |

<sup>1</sup>The uncertainty covered by the Calibration and Measurement Capability (CMC) is expressed as the expanded uncertainty having a coverage probability of approximately 95 %. It is the smallest measurement uncertainty that a laboratory can achieve within its scope of accreditation when performing calibrations of a best existing device. The

# SCOPE OF ACCREDITATION

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measurement uncertainty reported on a calibration certificate may be greater than that provided in the CMC due to the behavior of the calibration item and other factors that may contribute to the uncertainty of a specific calibration.

<sup>2</sup>When uncertainty is stated in relative terms (such as percent, a multiplier expressed as a decimal fraction or in scientific notation), it is in relation to instrument reading or instrument output, as appropriate, unless otherwise indicated.

<sup>3</sup>Calibrations available also at site: note that actual measurement uncertainties achievable at a customer's site can normally be expected to be larger than the uncertainties listed on this Scope of Accreditation.

## Notes:

(d) = differential pressure

(a) = absolute pressure

(g) = gauge pressure

ppm = parts in  $10^6$

ppt = parts in  $10^3$

NTU = Nephelometric Turbidity Unit