

## Chemical Quantities

Parameter/Equipment	Range	Expanded Uncertainty of Measurement (+/-)	Reference Standard, Method, and/or Equipment
<sup>1,2</sup> pH Meter	4.01 pH 7.01 pH 10.01 pH	0.012 pH 0.012 pH 0.012 pH	pH Solution Buffer
<sup>1,2</sup> Conductivity Meter	84 µS/cm 1 413 µS/cm 12 880 µS/cm	0.6 µS/cm 8.2 µS/cm 75 µS/cm	STD Conductivity Solution
<sup>1</sup> Refractometer	5 %Brix 10 %Brix 20 %Brix 30 %Brix 60 %Brix	0.075 %Brix 0.074 %Brix 0.074 %Brix 0.073 %Brix 0.072 %Brix	Sucrose Standard Solution
<sup>1</sup> Refractometer Refractive Index	1.340 27 nD 1.347 84 nD 1.363 85 nD 1.381 14 nD 1.441 89 nD	0.000 11 nD 0.000 11 nD 0.000 11 nD 0.000 11 nD 0.000 11 nD	Sucrose Standard Solution
<sup>1</sup> Turbidity meter	20 NTU 100 NTU 200 NTU 800 NTU	0.12 NTU 0.4 NTU 1.2 NTU 6 NTU	Turbidity Standard Solution
<sup>1</sup> Viscometer Rotational @25°C	101.1 cP 6 618 cP 15 608 cP	0.16 cP 15 cP 36 cP	STD Viscosity Solution
<sup>1</sup> Total Dissolved Solids (TDS) Meter	1 000 mg/l	32 mg/l	TDS Solution
Breath Alcohol Tester/Analyzer	44 mg/dL 70 mg/dL	1 % of reading 1 % of reading	Alcohol Standard Solutions
<sup>1</sup> Gas Detectors Carbon Dioxide  Methane  Oxygen  Sulphur Dioxide	100 µmol/mol  22 mmol/mol  18 cmol/mol  1 000 µmol/mol	1 % of reading  1.5 % of reading  1.1 % of reading  1 % of reading	Accredited Gas Mixtures
<sup>1</sup> Salinity Meter Nominal	50 000 mg/l (5 %Salinity) 180 000 mg/l (18 %Salinity)	0.014 %Salinity 0.054 % Salinity	Accredited Sodium Chloride Solution