

Application Note

Temperature Correction

200 Series Meter

The Denver 200 Series Meters have a function to display the conductivity reading at a set temperature (versus displaying conductivity at the current temperature). The default meter setting is a correction factor of 1.9% per degree Celsius to 25°C.

During standardization, it is important to enter the value of your conductivity standard at the current temperature so the meter can correct accordingly. To calculate the conductivity at the current temperature:

1. Subtract the current temperature of your standard from 25°C (the temperature at which the value of the standard was calculated).
2. Multiply this number by 1.9% which is your default temperature coefficient.
3. Multiply this number by the value of your standard (from the bottle).
4. If temperature is less than 25 oC, subtract this number from the value of your standard (from the bottle). If the temperature is higher than 25 oC, add this number from the value of your standard. This is the value you enter in the instrument for the standard value during standardization.

For example, if I have a standard solution that is 1035 uS and my current temperature is 23.4°C,

1. $25.0 - 23.4 = 1.6$
2. $1.6 * 0.019 = 0.0304$
3. $0.0304 * 1035 = 31.46$
4. $1035 - 31 = 1004 \text{ uS}$

Type in a value of 1004 uS into the meter. With temperature correction the meter will display a reading of 1035uS, the true value of the standard at 25°C.