WATER POTENTIAL SENSORS

All Wescor water potential sensors operate on the same basic principles; they are all thermocouple psychrometers.

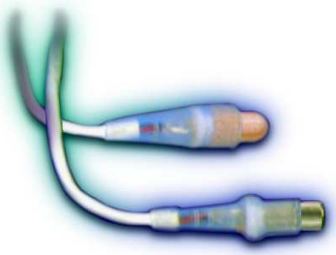
They have been optimized for different applications.

C-52

The C-52 sensor is a versatile sample chamber which, because of its mass, is extremely stable. Thermal gradients are the single biggest enemy of psychrometric methods, and this sensor comes closest to being an isothermal system. It is appropriate for measuring solutions, leaf discs, small soil and other small volume samples.

C-30

The C-30 sensor is a sample chamber with much larger volume capacity. It is much more affected by temperature gradients than the C-52, so immersion in a water bath or placement in an insulated box is recommended. It is best suited for larger volume samples, such as entire rolled up plant leaves or larger soil samples.



PST- AND PCT-

The PST- and PCT- series soil psychrometers are designed for in situ water potential measurements in soil. These sensors are affected by temperature gradients and better results are obtained in soil depths of 25 cm or greater. The PST- series has a non-removable stainless steel shield, which has a larger pore size and more rapid equilibration. The PCT- series has a removable ceramic shield which has thermal and moisture conductivity properties similar to most soils.

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L-51

The L-51 series sensors are designed for in situ water potential measurements in intact leaves. They are housed in an aluminum block to aid in maintaining thermal equilibrium. A nylon mounting bracket is attached to further isolate the sensor thermally. The L-51A has a narrower chamber to facilitate use with smaller leaves, such as grasses.

VAPRO

The Vapro vapor pressure osmometer is the easiest to use system that we offer. Readout is direct in either water potential or osmolality measurement units; all calculations and corrections are handled internally. This unit is best suited for laboratory studies.

CHOOSING THE APPROPRIATE SENSOR

APPLICATIONS	SENSORS				
	C-52 chamber	C-30 chamber	L-51 L-51A	PST-55 PCT 55	Vapro 5520
Liquids / osmotic potential	✔	✔			✔
Soil water potential	✔	✔		✔	✔
in situ soil water potential				✔	
Leaf disc water potential	✔				✔
in situ leaf water potential			✔		
Whole leaf water potential		✔	✔		

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