

Calibration Check for RH BluePeg Probes for 75% (33%)

Saturated salt solutions are used for checking the accuracy of RH probes. The science behind the test is, that a saturated salt solution will establish and keep a constant relative humidity in an enclosed space. The relative humidity for the most commonly used salt solutions is 75% and 33%. Small variations occur when the temperature changes, corresponding values are listed on the bottle. For instance, at a temperature of 68°F the relative humidity in the bottle will always after acclimation be 75.5%.

If the RH probes are tested to comply with ASTM F2170 for measuring moisture in concrete slabs, the permissible variation is +/- 2% from the nominal relative humidity value for the HR75 test salt. Testing should be performed within 30 days of re-using the RH probes. See ASTM standard F2170 for further requirements to check the calibration of in-situ RH probes.

When not in use, keep the blue bottle stored inside the plastic bag, inside the closed silver foil to avoid unnecessary evaporation of the liquid inside the bottle. As long as there is still liquid visible in the bottle, the bottle can be used for testing.

It is important to keep the salt solution and the RH BluePeg probe hours before the test and during the test at a stable temperature. Changes in temperature 1-2°F can affect the measured results up to +/-3% RH.

Test Procedure: Connect the RH BluePeg probe to the end of the cable with the sleeve-cover and blue hood. Remove the blue cap from the bottle and put the RH probe inside. Push the black sleeve-cover with blue hood firmly into the opening. To make sure, that the probe is all the way at the bottom of the bottle, push the cable towards the blue hood.

Wait at least 2 hours for acclimation before taking readings. Push the READ key and the RH value is shown, push the HOLD key and the ▼ key to get the corresponding ambient temperature. Note both, temperature and relative humidity. You can leave the BluePeg probes in the salt solution overnight and read the next morning, but do not leave the probes in the bottle more than 24 hours. After the test is done, remove the RH probe. Make sure the bottle is stored in the plastic bag and the silver foil.



The HR75 bottle lists temperatures and the corresponding relative humidity values. Check for a maximum variation of +/-2% from your measurements for ASTM F2170 concrete testing. Values for 75% are listed below. For values for 33% at different temperatures, check the salt bottle.

Temp °C	15°C		20°C		25°C		30°C		35°C
Temp °F	59°F	64°F	68°F	73°F	77°F	82°F	86°F	91°F	95°F
RH %	75.61	75.53	75.47	75.37	75.29	75.17	75.09	74.97	74.87



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