

## How to Locate Leaks with a Moisture Meter

When it comes to leaks in a structure, whether that structure is an office or a home, timeliness is of the utmost importance in minimizing the cost of a leak. Leaks not only add to the cost of a utility bill, the damage caused by water intrusion into the structure can require thousands of dollars of remediation and repair.

For many common leaks, finding and fixing the source of the problem is relatively straightforward. For example, a leaky faucet or shower head might require the tightening or replacement of a seal, and the source of the leak is in plain sight. However, not all leaks occur in simple, easy to reach or see spots. Sometimes, water intrusion occurs in places where you cannot immediately see it, such as behind a wall or in the ceiling, where the visible signs of a leak might not appear right away.

[Moisture meters](#) are a very helpful tool for detecting the presence of moisture in building materials, and for helping to pinpoint the source of that moisture intrusion, even when the origin point may be out of sight.

“How so,” you ask?

### Tracing Leaks in Dry Plaster, Brick, and Concrete

Masonry materials such as dry plaster, brick, and concrete typically have very little moisture in them. Sometimes, when these materials are tested with a moisture meter in a reference scale mode, there is so little moisture that the meter cannot detect it.

Thankfully, if you find moisture in one of these materials, there’s a trick you can use to pinpoint the origin point of a leak in masonry materials.

To pull it off, you’ll need the following:

- A nail, one made of a ductile metal
- Insulated wire
- A pin-type moisture meter such as the [BD-2100](#)



To start the process, drive the nail into the area of the masonry that you know to be wet. Then, attach the insulated wire to the nail and one of the meter’s contact pins.

Once the wire is attached to one of the contact pins, apply the other pin to different parts of the wall where you suspect the leak may be originating from. If the meter gives a “wet” response, the wall is wet between the two contact points. If the meter gives a “dry” response, the material is not in the path of a leak.

Repeat the test until you’ve identified the limit of the “wet” response area.

This trick should help you pinpoint the origin point of a leak behind a masonry wall.



## Testing Insulation for Moisture

When loosely-packed insulation gets wet, the moisture not only ruins the value of the insulation as a means to keep the temperature of a building stable, that insulation becomes a potential host for mold. Over time, the moisture trapped in insulation will begin to affect the structures that the insulation is in contact with, causing damage.

[To test insulation](#), you will want to use a moisture meter with extended-length probes such as Delmhorst's 21-E electrode with #608 pins, which are insulated pins that penetrate to 3 1/4" deep (6" penetration type also available). Because only the tips of these pins are uninsulated, you'll be able to identify just how deep into the insulation the moisture pocket goes.

While you won't have to tear down the whole wall to get at the insulation to start testing, you will need to drill two holes that are 3/16" in diameter, set one inch apart in your siding or drywall. Once the holes have been drilled, push the pins into the holes and start taking readings at different depths using the reference scale setting of your meter. The reference scale setting will give you a qualitative reading of whether or not moisture is present in the material being tested.



When you're finished taking readings, seal the holes that were drilled with an appropriate filler.

Depending on the distribution of moisture in the insulation, you may be able to establish whether the moisture is the result of a leak or if it is caused by condensation.

In side walls and roof insulation, moisture intrusion is generally the result of leaks in the roof or other structural defects in the side walls that allow water (such as from melting snow & ice) to penetrate the structure. During cold weather, water vapor in the air will condense, with some remaining trapped in the insulation.

Generally speaking, when moisture intrusion comes from a pipe leak in the wall, you'll see much higher concentrations of moisture below the pipe, with little moisture being present in material above the pipe.

By using moisture meters to help you pinpoint the location of a leak in your structure, you can save time and money by letting your [plumber or restoration professional](#) know where the leak is coming from. The less time they have to spend looking for a leak, the lower your cost for labor will be.

To learn more about moisture meters and how they work, [download here](#) our free Moisture Meters 101 guide.



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