



# Moisture Register Products

a division of AQUA Measure Instrument Co.  
1712 Earhart Court · La Verne, CA 91750 · USA  
909.392.5833 · 800.966.4788 · Fax 909.392.5838

## Model DG9 Moisture Meter Powdered and Granular Material



### Outstanding Features

- 5 Different Needle Electrodes Available Optionally - For application versatility
- 12 Different Sensitivity Modules Available Optionally - For high to low range moisture sensitivity
- Rechargeable NiMH Batteries - Eliminates costly battery replacement
- Furnished with Carrying Case, Transformer Plug-in Charger, Instruction Manual

The Model DG9 offers flexibility and adaptability for almost any moisture application. This instrument uses digital microcomputer circuitry to provide fast, accurate and reliable non-destructive moisture measurement for many products. The Model DG9 may be used for comparative testing without calibration or to determine the actual percentage of moisture after calibration. The Model DG9 will hold 100 different calibration curves. These curves are stored in permanent memory in tables 00 through 99. A fully discharged battery will not cause data in the table to be lost. The DG9 can test materials with a fairly constant bulk density and a consistent change of radio frequency properties with change in moisture content. These materials include semisolids; powdered, granular, textile materials; pliable sheets in rolls or stacks, chips, chunks or flakes.

Operating on the radio frequency power loss absorption principle, which is a patented feature of Moisture Register Products, the DG9 projects an RF field into the test area. This RF field extends approximately three inches surrounding DG9's electrode needles.

**Targeting<sup>the</sup> Solution**    [www.moistureregisterproducts.com](http://www.moistureregisterproducts.com) ·  
[sales@aquameasure.com](mailto:sales@aquameasure.com)

Any material containing moisture will absorb part of this RF energy current and cause a change in the meter readings. When calibrated to the material being tested, the meter reading is in direct moisture content.

The DG9 consists of a needle electrode assembly, which connects to a sensitivity module, which is connected to the meter by a three foot cable. The molded plastic handle contains a spring loaded switch bar for momentary testing, while the On-Off switch permits a series of tests.

Tests can be made by inserting the needles directly through a sack, or between layers of paper or other stacks of soft material. Greater accuracy is achieved by measuring a large volume of sample.

The Model DG9 is furnished with the proper sensitivity modules which are pre-selected to cover the desired range of moisture contents for the material being tested. Any of 12 modules can be added as use of the instrument is extended to new material and ranges.

### **Interchangeable Sensitivity Modules**

The use of solid state sensitivity modules gives the DG9 a broad moisture range capability. The modules permit more sensitivity in low moisture ranges as well as the ability to check high moisture content of up to 80% on some materials. Twelve different sensitivity modules are available, each with varying degrees of sensitivity. Beginning with the highest sensitivity (for very low moisture content), the modules available are: 450, 400, 250, 150, 100, 070, 050, 040, 030, 025, 020, and 010. The 010 is the least sensitive module, and in most cases is used in high moisture applications.

### **Calibration:**

A calibration curve must be prepared for the Model DG9 by taking dial readings on several samples having different moisture contents spaced throughout the desired range. The actual moisture contents of the samples are determined by oven, distillation, or other standard laboratory methods. These percentages and dial readings are then programmed into the DG9 internal memory chip to provide direct reading percent moisture on the digital display.

### **Needle Electrodes**

The needle electrode consists of two tapered stainless steel needles. Each needle has a 3/16 inch diameter, and they are mounted 3/4 inch apart on a Teflon plastic mounting block. Five different needle assemblies are available, ranging from 5/16 inch, 2 inch, 4 inch, 6 inch, and 12 inch.

The long needles test and average more sample and yield steeper curves. Short needles permit tests on thinner or smaller samples. Free Sample Testing is available in our laboratory.

Should you wish to submit samples for full analysis an Application Data Sheet should be filled out and sent to us along with representative samples. Our laboratory will make the necessary tests, determine the most suitable sensitivity module for your material and moisture range, and prepare a calibration curve.