



H-BD5-MS4810DRS

Moisture Analyzer

Refer:HBD5-MS4810DRS_IntE

Professional for both of solids and liquids

- *Intelligent Analysis Based on Powerful CPU, Reliable, solid state design*
- *Rapid Test, Lab Accurate*
- *Proven technology, Multi-parameters Tested for Compensation*
- *100 frame Data log*
- *LCD 2x16 Display, Backlight Available*
- *RS232/485 Communication, printer supported by RS232C*
- *Full Function Keypad Operation*
- *Memo Driven Software Operation and Setup*



The LDRP Reflectance Spectrometer is a portable instrument designed for industry field and laboratory investigations of chemical composition both of liquids and solids materials.

Technically, the LDRP is a multi-band photometer rather than a spectrometer, because it does not measure reflectance across a continuum of wavelengths. Rather, it measures reflectance in separate, non-overlapping ranges of wavelength. However, this distinction is not important for most applications. The LDRP consists of lamps, a photo-detector, and an analyzer with display. These elements are arranged and coordinated with the sample and with each other to provide reproducible, easily interpretable results.

The Lamps are arranged so that their light passes are the same for each wavelength, being directed on to the surface of samples to be measured. And the diffused light after absorption by the samples was collected with focus system to the sensor.

In this configuration, the LDRP works best and most reproducibly with flat objects that have matte surfaces. Some shininess (as in most leaves) is acceptable.

Mirror-like surfaces will yield spurious readings.

For moderately rough surfaces, as small particles, the LDRP yields reasonable values for reflectance. With very rough samples, light leaks can be a problem. Users can use the light protector sleeve to stop light leaks.

H-BD5-LDRP481X is special to samples. Users always need calibration for special applications. Internal memory capable of storing 8 separate calibrations. Use the calibrations provided by system, or create your own calibrations using the software function provided.

LDRP481X is designed for macroscopical functional compounds quality analysis, LDRS482X is designed for specific molecules analysis.

Measure Method

Diffuse Reflectance Photometer (DRP)

Diffuse Reflectance Spectroscopy (DRS)
Diffuse Transmittance Photometer (DTP)
Diffuse Transmittance Spectroscopy (DTS)

Features

- Instant Measurement
- Non-Contact
- Non-Destructive
- Versatile usage

Usage

Quantitative moisture analysis for solids and liquids, with high selectivity.

Application Details

The high OH absorption coefficient in the NIR Region makes BDTI Vis/NIR analyzers an ideal tool for accurate and flexible moisture analysis in raw materials, in-process and finished product. Using NIR as opposed to traditional, lengthy, and costly traditional moisture analysis, could save significant money and time.

Nutrient With growing pressure from the Food and Drug Administration on nutriment companies to standardize ingredients and ensure product purity, NIR technology has emerged as a cost-effective means for quality control in the manufacturing process of natural supplements. With the wider spectral range of LDRP and LDRS than other NIR instruments available, BDTI is taking 100% inspection of raw materials and finished products to a higher level by providing a vehicle for more reliable spectral data collection and seamless user-friendly interfaces to available chemometric software. Professional food Nutritional Analysis, enabling raw material testing quickly—at the dock, on the manufacturing floor, or where ever it is needed—positioning you to meet GMP and FDA requirements, quickly and easily.

Examples:

- Chemicals, Ink
- Pulp/Paper
- Pharmaceuticals
- Food, Beverages and Dairy
- Agriculture Grain, soil, woods, fruits, Greenstuffs
- Cement and other materials
- Cosmetics and Beauty Products
- Lubricant Oils, machine oils, fuel oils
- Plastics, polymers

General Specifications

Moisture Range: 0.01-100%;

Liquid Range: 0.01-100/1000ppm; to 100%

Accuracy: <±1%Rel or 0.01% abs, whichever great;

Outputs: 2x16 LCD display,

Data Transfer: Via RS-232 port for interface with PC

Calibrations: Stores up to 7 calibration sets

Data Storage: Stores data for up to 100 samples

Optical Capabilities

Measurement Mode: Diffuse transmittance, Diffuse reflectance

Spectrum Range: ±10nm around 1.94um

Scan Speed: 100ms;

Optical Range: 0 to 6 AU

Resolution: 0.00001 AU

Stability: 0.05 Mili-AU

Measurement Time: Variable (Typically under 20 seconds)

Sample Information

Sample Volume: 100-200mL in cup or directly in tank liquid and upon surface of solids stacks with thickness >75 mm.

Sample Size: any samples.

Sample Holder: Reusable glass or none

Sample Preparation: Not required

Sample Destruction:No

Physical Data

Dimensions:

Analyzer: 98mm X 180mm X 30mm

Sensor: Ø56x250 mm

Weight: less than 2 kg

Supply:

Inside Power Supply: 6-9V DC;

AC Power Requirements.....120 or 240 VAC 50/60 Hz AC adapter (supplied)

DC Power Requirements (included)

Power Consumption250 mA

HBD5MS4810 Models

Model	Code	Measurement Property	Specifications	Applications
LDRS4812PC-	SWNIR2B01	Total moisture both of intra- or intermolecular water	DRS Moisture :0.1-100% ; TP Liq.0.1-1000ppm,1% Environ temperature:0-35°C	Liquids/solids; *Not recommended for starch, alcohols, acid and other polyols; not for liquid with dissolved gas as N2O,CH4, N2H4, not for liquid containing Te;
LDRS4812PC-	MNIR2B01	Total moisture of absorbed and condensed	DRS Moisture :0.05-100% TP Liq.0.003-30ppm Environ temperature:0-50°C Max to 60°C	Liquids/solids; *Not recommended for starch, alcohols, acid and other polyols; Not suitable for aromatics,NH3 liquids;
LDRS4812PC-	MNIR2B02	Moisture both of water with one hydrogen bond and water with two hydrogen bonds	DRS Moisture :0.05-100% TP Liq.0.003-30ppm Environ temperature:0-50°C	Liquids/solids *Not recommended for starch, alcohols, acid and other polyols; Not for NH3,C2H2 liquids
LDRS4811WMS-	MNIR1B01	Water without hydrogen bond	DRS Moisture :0.05-100% TP Liq.0.003-30ppm Environ temperature:0-50°C	Solids; Not for CH3OH, aromatics,PCBs;
LDRS4813WMS-	MNIR3B01	Can identify: water with no hydrogen bond (W0) water with one hydrogen bond (W1)(intra-molecular hydrogen bonds) water with two hydrogen bonds (W2) (intermolecular hydrogen bonds, Crystal water)r)	DRS Moisture :0.1-100% TP Liq.0.003-30ppm Environ temperature:0-50°C	Solids Not for CH3OH, aromatics,PCBs; Not for NH3,C2H2 liquids
LDRS4811WMS-	LNIR1B01	Free water molecules	Liquid DRS Moisture:0.002-20ppm	Liquids/gas Not suitable for liquids with

			Gas moisture:0.3-3000ppm; Environ temperature: 0-40°C WT :-40-50°C	dissolved gas as H2S;
LDRS4811WMS-	LNIR1B02	Absorbed water	DRS Moisture:0.01-100% Liquid moisture:0.002-20ppm Environ temperature: 0-40°C WT :-40-50°C	Liquids/solids Not suitable for liquids with dissolved gas as H2S;
LDRS4821WMS-	LNIR1B02	All state of water molecules	DRS Moisture :0.01-100% TP moisture:0.002-20ppm Gas moisture:0.3-3000ppm; Environ temperature: 0-40°C WT :-40-50°C *Portable only	Liquids/solids Not suitable for liquids with dissolved gas as H2S;

*TP method is used for liquid and gas;

*DRS is used for both of solids and liquids

Standard Instrument Units

Items	Model	Quat.	Information	Status
Analyzer	H-BD5	1		Included
Single 9V rechargeable battery		1	DC Power supply	Included
Changer	AC-DC Adaptor	1	Power charger: Default as 220 V AC to 12 DC; Other local supply system must order specially	Supplied
Sensor	LDRP	1		Included
Package		1		Included
Transmission reflector		1		Included

Optional Accessories

Items	Model	Quat.	Information	Status
Automobile Charger Adapter	12V		Power charger:	Optional
Micro Printer				Optional
Print paper			20 coils / package	

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