Liquid Dielectric Constant Meter (Model 871)



Features

- Wide range measurement of the dielectric constant from water to non-polar solvents
 Range 1~20, Range 1~200
- · Very useful for the Mixtures
- Improvement for the calculation of Zeta Potential
- High accuracy: ±2%
- Simple to use
- Recording software (Optional, Temperature sensor included)

Recording software (Optional)

- Contents
- AD converter
- Recording software (English)
- Temperature Sensor
- Ability to do
- Recording measurement values to PC
- Measuring temperature simultaneously
- Making approximate expression
 (Showing the measuring value at same temperature.)
- Saving and exporting of Measured data (csv file extension).



Measurement for Common Liquid

Solvent	Measured value	Temp. (°C)	Ref.1)	Error%2)
Distilled Water	82.9	16.3	81.5	1.7
	79.2	20.4	80.0	-1.0
	77.2	25.2	78.3	-1.4
Methanol	34.7	16.1	34.1	1.7
	33.8	21.3	33.2	1.8
	32.8	26.1	32.4	1.1
Cyclohexane	2.05	17.8	2.03	1.1
	2.05	20.6	2.02	1.3
	2.04	25.0	2.02	1.2
Toluene	2.43	15.2	2.40	1.3
	2.42	20.2	2.39	1.4
	2.40	24.0	2.38	1.0
Methanol + Water (1:1)	61.5	25.0	n/a	n/a

- 1) Reference value: CRC Handbook of Chemistry and Physics
- 2) %error = {(Measured Reference) / Reference} × 100

Specification

- Full Scale Sensitivity: 1~20 and 1~200
- Maximum Conductivity of Sample:

Range $1 \sim 20:1 \mu \text{S/cm}$ Range $1 \sim 200:10 \mu \text{S/cm}$

(<0.05 mM 1:1 electrolyte)

Measurement Signal: Low-distortion 10 kHz sine wave, about 7 volts rms

Probe Materials: Stainless steel and Teflon

Accuracy: ±2%

Repeatability: ±0.2%

Sample Volume: 42 mL

Operating Temperature: 22~58°C

· Display: LED

Power: 110/220 volts, 50/60 Hz, 10 watts

• Size: 197(W) × 250(D) × 85(H) mm



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