

Storage, Cleaning, and Handling of BI-870 Probe			
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1. Purpose

The following document describes the procedure on the storage, cleaning, and handling of Brookhaven Instruments BI-870 probe.

2. Scope

The dielectric constant of the liquid sample is determined by measuring the current between the outer and inner cylinders of the probe. With a stable voltage source and precisely known probe parameters, it is possible to display the dielectric constant directly.

The probe is constructed from two accurately machined stainless steel cylinders. Six Teflon® balls provide the cylinder spacing. Two Teflon® cables connect the probe to the instrument.

3. Responsibilities

- 3.1.1** It is the responsibility of designated personnel to train staff and/or students on this procedure and to ensure adherence to this procedure.
- 3.1.2** It is the responsibility of designated personnel (staff or student) to follow the instructions of this procedure.

4. References

Instruction Manual for BI-870 Dielectric Constant Meter.

5. Precautions

- 5.1.1** Any residue of the liquid left in the probe will affect measurement accuracy. It is critical that the probe be cleaned before any residue dries on the cylinder.
- 5.1.2** Do not clean the probe with a cotton swab. Inserting a cotton swab between the cylinders or inside the inner cylinder could affect calibration.
- 5.1.3** Do not disassemble the probe to clean it. The accuracy of the measurement may be compromised.

6. Procedure for Storage of the BI-870 Dielectric Constant Meter Probe

The dielectric constant meter probe should be stored in a clean, dry foam sleeve where it is fully protected.



7. Procedure for Cleaning of the BI-870 Dielectric Constant Meter Probe

- 7.1.1** The dielectric constant meter probe can be rinsed with acetone or ethyl alcohol, followed by gently drying with clean compressed air.
- 7.1.2** The probe should be cleaned before any a liquid dries on the cylinder. If residue dries on the probe, clean with high-grade acetone or alcohol.

8. Procedure for Handling of the BI-870 Dielectric Constant Meter Probe

- 8.1.1** Personnel should be equipped with appropriate personal protective equipment (PPE).
- 8.1.2** Care must be taken to avoid damage to the probe. End of life for this device is determined based on wear and damage due to use.
- 8.1.3** Even lightly knocking the outer tube on a lab bench can crush the Teflon® balls. Damage to the Teflon® balls may result in a short between the two cylinders.
- 8.1.4** The connections between the cables and cylinder components are very delicate. Dropping the probe, or pulling on the cable wires could rupture their solder connections.
- 8.1.5** Check probe to ensure there are no damaged or worn parts. Probe and cables that are damaged or worn should not be used and should be replaced.

9. Warranty

- 9.1.1** Brookhaven Instruments Corporation warrants that the product is free from defective material and workmanship. Under the terms of the warranty Brookhaven Instruments Corporation agrees to correct by repair or at Brookhaven Instrument Corporation's election by replacement, any parts which prove to be defective through no fault of the user.
- 9.1.2** This warranty is limited to the original purchaser of the product.



Standard Operating Procedure

- 9.1.3** The product shall be shipped, freight prepaid and insured in full, or delivered to a facility authorized by Brookhaven Instruments Corporation to render the service provided thereunder, in either the original package or in a similar package affording an equal degree of protection. The purchaser must contact Brookhaven Instruments Corporation for instruction prior to returning the product.
- 9.1.4** The product shall not have been previously altered, repaired or serviced by anyone other than a service facility authorized by Brookhaven Instruments Corporation. The product shall not have been subjected to accident, misuse or abuse, or operated contrary to the instructions contained in the instruction manual or SOP.
- 9.1.5** Brookhaven Instruments Corporation shall not be liable for direct, indirect, incidental, consequential, or other type of damages resulting from use of this product other than the liability stated above. These warranties are in lieu of all other warranties, expressed or implied, including, but not limited to the implied warranties of merchantability or fitness for a particular purpose.
- 9.1.6** The Brookhaven Instruments Corporation warranty extends for a period of 90 days. This period is from the date of receipt of the equipment, and it applies only to the original purchaser. The warranty period is automatically extended to 1 year (except as noted below) from the date of receipt of the equipment provided all invoices for said equipment, including transportation, if applicable, are paid within 30 days after receipt of invoice.