

# BI-ZTU

Autotitrator for NanoBrook Zeta Potential Analyzers

### **Applications**

- Determine isoelectric point with acid/base or reagent titration
- Optimize surfactant concentration
- Measure effect of salt concentrations (ionic strength) on zeta potential

The **BI-ZTU** Autotitrator option for the NanoBrook ZetaPlus and ZetaPALS zeta potential analyzers is ideal for automatic determination of the isoelectric point, the IEP, of colloidal materials. Four pumps provide unparalleled flexibility for optimizing reagent use. The dramatic savings of reduced labor costs will also encourage larger scale studies that will produce more valuable results.

In addition, the **BI-ZTU** can be used to evaluate the effect of salt concentration on zeta potential. Also, the surfactant costs can be minimized. Use the **BI-ZTU** to find the minimum concentration at which the zeta potential does not significantly change.

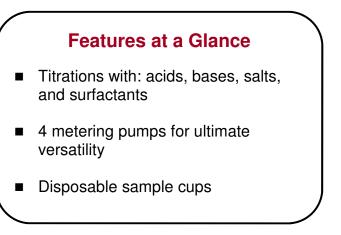
#### **Easy Operation**

Attach the power supply to the rear of the **BI-ZTU**. Connect the **BI-ZTU** to the NanoBrook zeta potential instrument using the standard USB cable. Fill the four 100 mL standard reagent bottles. Insert the tubes. Replace the plug-in electrode assembly with the flow cell. You are ready to go.



#### Integrated, Simple Software

When the **BI-ZTU** option is added to a NanoBrook zeta potential instrument, the titrator command appears in the main menu bar. The software automatically guides the user through an autotitration experiment. User friendly dialog boxes guide even the inexperience operator through each step.



## BI-ZTU Autotitrator for Zeta Potential Analyzers

pH	Zeta Potential (mV)	Operator ID: JTB
2.20	52.21	Notes: pH increasing
2.77	54.55 51.34	Bottle 1 - Acid: Nitric 1.00e-01 Molar
5.21	25.71	Bottle 2 - Acid: Nitric 1.00e+00 Millimolar
6.40	-7.10	Bottle 3 - Base: Potassium Hydroxide 1.00e-01 Molar
9.13	-38.49	Bottle 4 - Base: Potassium Hydroxide 1.00e+00 Millimolar
9.22	-37.91	Dotte 4 - Dase, Fotassium Hydroxide 1.00e+00 Millimolar
9.95	-41.51	pH = 2.20 Zeta Potential = 52.21 mV Isoelectric Point = 6.14
10.81	-46.01	
	-41.49	70.00
11.79		
11.79 C	-41.49	35.00 35.00 0.00 35.00
11.79 C	-41.49 Copy to Clipboard	35.00 .00 .00

Example of pH titration measurement results. Data was collected and analyzed automatically, saving labor and time.

#### **Specifications**

Range	pH 2 to pH 12
Cell	Flow cell included; fits into instrument's square cell holder; for use with NanoBrook: 90Plus Zeta, 90Plus PALS, ZetaPlus, ZetaPALS, and Omni.
Tubing	1 mm (0.04") or greater I.D. Teflon, PEEK, and EPDM
External Fittings	1/4" - 28 flat bottom
Includes	pH probe and 4, 100 mL screw-cap bottles
Size	310 x 180 x 290 HWD in mm
Power	110/115/220/240 VAC, 50/60 Hz, 25 watts

A policy of continual improvement may lead to specification changes

With distributors around the world, contact us for details about the office nearest you.



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