



## **Protocol for Use of Validex<sup>®</sup>** Water Count Reference Standards

### **Product Description**

This product contains NIST traceable polymer microspheres packaged in ultrapure water at concentrations ideal for use in validating the performance of liquid particle counters. The composition of the suspension has been optimized to promote dispersion of the particles. Each bottle contains 500 mL of suspension at a nominal concentration of 1000 particles/mL. A stir bar is included in the bottle to aid dispersion.

### **Materials Needed**

Validex Water Count Reference Standard  
liquid particle counter  
delivery system  
magnetic stir plate  
sonic bath (if available)  
particle-free water

### **Instructions**

1. Bring the particle count control suspension to room temperature before use.
2. Determine and set the instrument's channels.
3. Make sure that the flow rate through the instrument is set to the manufacturer's specifications.
4. Run filtered water through the instrument until a near zero count is obtained.
5. Resuspend the particle suspension by inverting the bottle gently five to ten times, sonicating for 15 seconds (if available), and placing it on a magnetic stir plate at medium speed.
6. Begin particle counting using the instrument manufacturer's guidelines.
7. Depending on the time interval of the data collection it may be necessary to discard the first and/or last data points to get the correct results.

### **Expiration Date**

The expiration date of the unopened bottle is 6 months from the date of packaging. Do not freeze the particle suspension, as freezing will irreversibly flocculate the particles. Once the bottle has been opened, the suspension should be used within a few hours.

### **Additional Information**

If you have any further questions regarding the use of this product, please contact the technical service department at Duke Scientific Corporation.