

8X Faster DLS Sample Preparation With the pUNK

The pUNK from Unchained Labs is the only dynamic light scattering (DLS) system in the world with patent pending 5µl BladeCell disposable sample cuvettes. Other leading DLS systems use traditional, non-disposable quartz glass cuvettes for low volume work, which must be cleaned between uses. Cleaning is a tiresome chore and introduces the risk of cross-contamination between samples. A study by Unchained Labs illustrates the extent of the time taken between useful DLS measurements when compared to the unique convenience of the BladeCells.

Traditional Quartz Cuvette

Total Sample Prep Time = 240 sec.

20 separate activities totalling 4 minutes

- [-] Cuvette Preparation (Total = 100sec)
 - Visual inspection through windows (5s)
 - Pipette filtered water into cuvette (10s)
 - Replace cap and clean windows (10s)
 - Insert into sample holder (5s)
 - Observe scattering intensity to ensure cleanliness (20s)
 - Remove cuvette (5s)
 - Use pipette to remove water (15s)
 - Dry cuvette using dry gas or air duster (30s)
- [-] Sample Loading (Total = 20sec)
 - Visual Inspection (5s)
 - Pipette sample into cuvette (10s)
 - Insert cuvette in holder (5s)
- Measurement Process (Sample Dependent Time)
- [-] Sample Recovery (Total = 15sec)
 - Remove cuvette (5s)
 - Recover sample (10s)
- [-] Cuvette Cleaning (Total = 105sec)
 - Dispense detergent solution into cuvette (5s)
 - Use Pasteur pipette to flush cuvette with detergent solution (20s)
 - Remove detergent solution (10s)
 - Use Pasteur pipette to flush cuvette copiously with running water (30s)
 - Remove water and dry with air duster (30s)
 - Replace cuvette cap and clean cuvette windows (10s)

BladeCell Disposable Cuvette

Total Sample Prep Time = 30 sec.

5 separate activities totalling 0.5 minutes

- Cuvette Preparation (Total = 0sec)
- [-] Sample Loading (Total = 15sec)
 - Pipette sample into cuvette (10s)
 - Insert cuvette in holder (5s)
- Measurement Process (Sample Dependent Time)
- [-] Sample Recovery (Total = 15sec)
 - Remove cuvette (5s)
 - Recover sample and dispose cuvette (10s)
- Cuvette Cleaning (Total = 0sec)

