



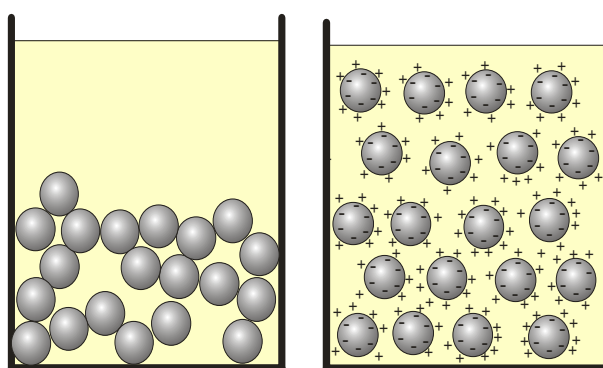
## Monitoring Destabilization of SPF 50 Sunscreen Spray by Using Stabino Zeta

### Introduction/Context

Controlling zeta potential is crucial for sunscreen sprays, as it affects particle stability and dispersibility. Maintaining an optimal zeta potential prevents aggregation, ensuring even skin coverage, improved stability, and effective sun protection. This enhances product quality, reliability, and consumer safety. Beside the zeta potential, polyelectrolyte (PE) titration to find the zero point of charge (zeta potential = 0) is another important parameter as it determines charge density, total charges, the amount of active ingredients, and the type of charge in cosmetic samples.

### Importance of Zeta potential in Sunscreen Spray:

- Higher zeta potential values generally indicate better stability of the sample.
- The skin's zeta potential is around -20 mV, so maintaining an optimal range for cosmetics is essential.
- **Positive Zeta Potential:** If it is too high, the product may be hard to wash off the skin.
- **Negative Zeta Potential:** If too negative, the product may not adhere well to the skin.



**Figure 1:** Samples without zeta potential sediment quickly, while those with high zeta potential stay suspended longer.