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STABINO ZETA

MICROTRAC MEB

NANOTRAC FLEX

Measuring Zeta Streaming Potential of Cannabis Emulsions Simultaneously with STABINO ZETA and NANOTRAC FLEX

Introduction

Microtrac's MRB Stabino Zeta (Fig. 1a) allows for the measurement of zeta streaming potential in addition to conductivity, temperature and pH. Zeta potential and streaming potential are widely used to characterize the stability of suspensions, emulsions and nanoparticles. The measurement methods for zeta potential include zeta streaming potential (Stabino zeta method, Fig. 1b) in which the liquid moves, and particles are immobilized. The zeta potential is then calculated from the relative displacement of the ion cloud, which is measured as a voltage, thus yielding the streaming potential via calibration factors (K). Conversely, the second method is via electrophoretic mobility (i.e. electrophoresis), where zeta potential is calculated from the movement of particles. However, difficulties exist from classical electrophoretic measurements such as irreproducibility, bubbles, chemical environmental shifts and dilutions.

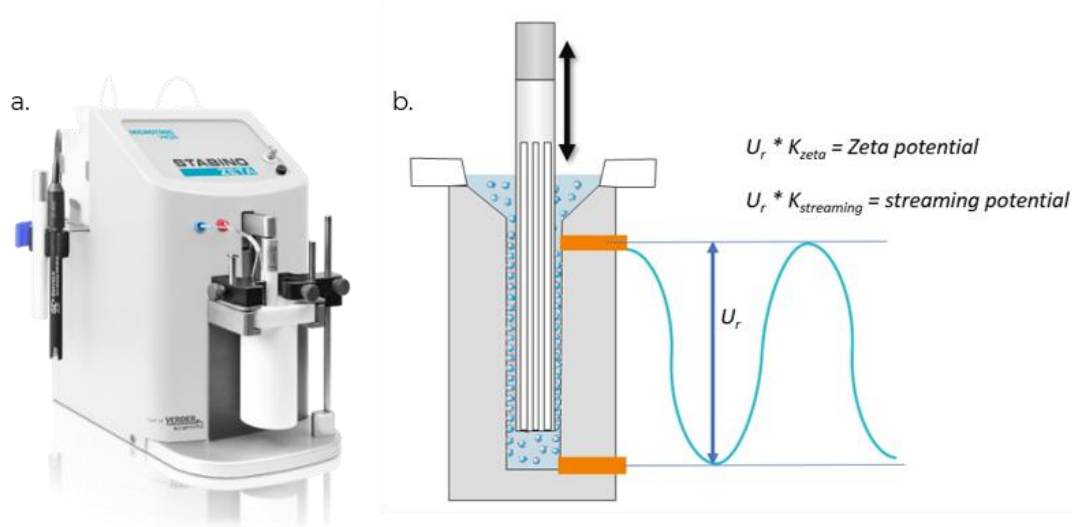


Figure 1: (a). STABINO ZETA and (b) Zeta potential calculated from relative displacement of the ion cloud measured at a voltage, U (streaming potential)