

COMPOUND POSITIONING METHOD FOR ULTRASONIC PIPETTING

FOCAL POINT

Abstract

A compound positioning method for an ultrasonic pipetting focal point, belonging to the technical field of ultrasonic pipetting, and comprising: providing on a pore plate a liquid to be tested, and providing below the pore plate a focused transducer; the focused transducer transmitting a low-intensity sound wave and, on the basis of an echo condition, determining a direction in which the focused transducer needs to be moved; moving the focused transducer in said direction and proceeding to test an echo, resuming the movement in said direction if the echo is enhanced or performing a movement in the reverse direction if the echo is weakened and, after several reciprocating movements, proceeding to increase the intensity of the low-intensity sound wave until a liquid surface fluctuates and echo oscillation occurs; and moving the focused transducer in any one direction to measure the echo oscillation, resuming the movement in this direction if the echo oscillation is enhanced or performing a movement in the reverse direction if the echo oscillation is weakened and, after several reciprocating movements, determining an ultrasonic pipetting focal point. In the method, there is no need to know the velocities of sound in liquid media, and the liquid to be tested is excited while the pore plate is located, thus simplifying the structure and reducing the cost.

Fig. 1