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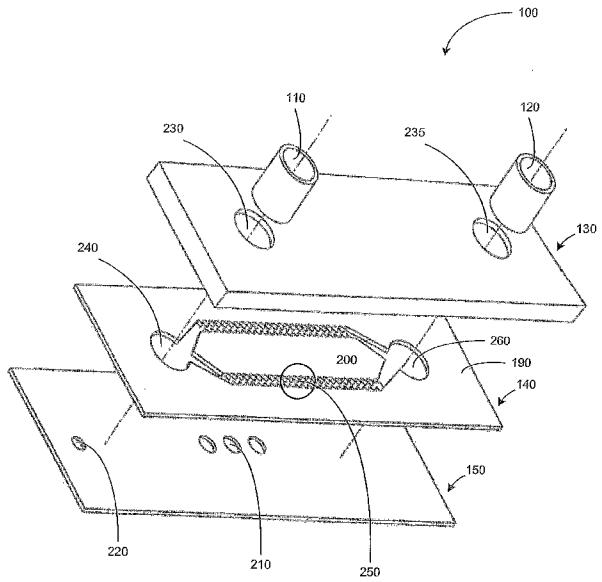
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(54) **Title:** BIOCHIP FOR SORTING AND LYSING BIOLOGICAL SAMPLES



(57) **Abstract:** A biochip (100) for lysing and/or cell separation is formed to provide a sealed chamber for biological fluid. A conductive layer (140) bonded between upper (130) and lower (150) insulating layers is etched to form a microfluidic channel (250) between two electrodes (190, 200). The microfluidic channel connects a fluid inlet (11) and fluid outlet (120). The electrodes (190, 200) form an un-even electric field in the channel (250) to generate a dielectrophoretic force on the cells/particles within the sample fluid. A voltage source applies a suitable voltage to separate and/or lyse cells within the fluid.

WO 2006/004558 A1