

ABSTRACT

SEPARATION APPARATUS AND SEPARATION METHOD

An isolation device (100) an isolation method, includes an isolation chip assembly (1), a vacuum system (50), a frequency converting module (40), and a controller (60). The isolation chip assembly (1) includes an isolation chip (10), first oscillators (20), and second oscillators (30). The isolation chip (10) has a sample reservoir (13), and a first filtration membrane (14) and a second filtration membrane (16) at opposite sides of the sample reservoir (13), a first chamber (15) and a second chamber (17). The first oscillators (20) are mounted on the first filtration membrane (14) and the second filtration membrane (16). The second oscillator (30) are mounted on the outer surfaces of the first chamber (15) and the second chamber (17). The frequency converting module (40) causes the vacuum system (50) to generate negative pressure in the first chamber (15) and in the second chamber (17). The controller (60) controls the first oscillators (20) and second oscillators (30) to operate when the vacuum system (50) stops generating the negative pressure in the first chamber (15), and further controls the first oscillators (20) and second oscillators (30) to operate when the vacuum system (50) stops generating the negative pressure in the second chamber (17).

Figure 1