CLAIMS

1. A system for extraction of cells from a sample of tissue, comprising a main device (1) and a disposable kit (4) for use with said main device,

characterized in that:

said main device (1) is configured to host at least one disposable kit and is configured to execute at least one preset program when loaded with at least one disposable kit;

said disposable kit (4) comprises a work chamber (11) for receiving a sample of tissue to be processed, and at least one further receptacle (12, 13),

said disposable kit comprises at least a pumping system and a valve system (14, 19) which are operable for selective introduction of a predetermined amount of fluid from said receptacle (12) into the work chamber (11), or selective discharge of a predetermined amount of fluid from the work chamber (11) to the receptacle or to one of the receptacles (12, 13) included in the disposable kit (~~12, 13~~4),

said main device comprises first interface means and said disposable kit comprises second interface means adapted to match with the first interface means of the main device,

said pumping system and valve system (14, 19) of the disposable kit (4) being controllable by the main device (1) during the execution of a preset program, via said interface means between the main device and the disposable kit.

2. A system according to claim 1, said interface means between the main device and a disposable kit (4) including one or more of the

8. A system according to claim 7, said first component comprising heat exchange means (56) for heating or cooling any of the work chamber (11) ~~of~~or receptacles (12) of the disposable kit.

9. A system according to claim 8, said heat exchange means being thermoelectric means working by Peltier effect.

10. A system according to any of claims 7 to 9, characterized in that said disposable kit comprises a substantially cylindrical body (10) which contains the work chamber (11), and a plurality of receptacles (12) which are radially arranged around said cylindrical body, and said first component is a drum (50) having a central passage (51) for accommodation of the cylindrical body (10), and a number of peripheral seats (54) for accommodation of the receptacles (12).

11. A system according to any of claims 7 to 10, characterized in that said container (3) comprises a third intermediate component which is a sealed, autoclave-proof capsule (60).

12. A system according to any of claims 7 to 11, characterized in that said second outer component is a capsule (70) which includes a first servo-motor encoder and a second servo-motor encoder for operation of the piston and valve member of the disposable kit, said capsule also comprising electric power and signal connections for operation of said servo-motors.

13. A system according to claim 12, characterized in that said capsule (70), or a plurality thereof, can be mounted on a rotary carrier of the main device, and each capsule is tiltable relative to said carrier, and the carrier comprises a signal connection with the main device and respective motorized means to control the tilting of the capsule or each of the capsules, in an independent manner and in accordance with the preset program executed by the main device.