CLAIMS

[Claim 1]

A cell processing system comprising:

an enclosure,

an intake air purification filter provided in the enclosure, that purifies gas that has been drawn in from outside the enclosure,

a returning member to return gas discharged from the enclosure back to the intake air purification filter,

a circulating apparatus that circulates gas between the enclosure and the returning member, in such a manner that the gas inside the enclosure is discharged into the returning member and the gas inside the returning member is drawn into the enclosure through the intake air purification filter, and that purifies the gas inside the enclosure and inside the returning member, and

a cell processing apparatus for processing of cells, disposed inside the enclosure,

wherein the returning member has a shape that engages with the enclosure in a removable manner.

[Claim 2]

The cell processing system according to claim 1, wherein the returning member comprises:

a base with a hollow interior, in contact with the bottom of the enclosure,

a first cover that allows communication between a first opening provided in the base and a ventilation unit provided on a first end face of the enclosure, and

a second cover that allows communication between a second opening provided in the base and a ventilation unit provided on a second end face of the enclosure.

[Claim 3]

The cell processing system according to claim 1, wherein the returning member is a duct.

[Claim 4]

The cell processing system according to any one of claims 1, 2 and 3, wherein the circulating apparatus comprises a gas discharger, provided in the enclosure, that draws in gas from

the enclosure and discharges the purified gas into the returning member.

[Claim 5]

The cell processing system according to claim 4, wherein the gas discharger comprises

an exhaust system that exhausts gas inside the enclosure into the returning member, and

an exhaust purification filter that purifies the gas that has been drawn in by the exhaust system.

[Claim 6]

The cell processing system according to claim 5, wherein the exhaust purification filter is situated upstream from the exhaust system.

[Claim 7]

The cell processing system according to claim 6, which further comprises a shielding member that can be attached to the exhaust purification filter so as to shield the exhaust purification filter.

[Claim 8]

The cell processing system according to claim 7, wherein the shielding member comprises:

an enclosure side shielding member that can be attached to the exhaust purification filter so as to shield the exhaust purification filter from the enclosure interior, and

an exhaust system side shielding member that can be attached to the exhaust purification filter so as to shield the exhaust purification filter from the exhaust system.

[Claim 9]

The cell processing system according to claim 7 or 8, which further comprises a sterilizing device that sterilizes the exhaust purification filter.

[Claim 10]

The cell processing system according to claim 6, which further comprises a second exhaust purification filter disposed downstream from the exhaust system.

[Claim 11]

The cell processing system according to claim 10, which further comprises a shielding member that can be attached to the second exhaust purification filter so as to shield the second exhaust purification filter.

[Claim 12]

The cell processing system according to claim 11, wherein the shielding member further comprises an exhaust system side shielding member that can be attached to the second exhaust purification filter, so as to shield the second exhaust purification filter from the exhaust system.

[Claim 13]

The cell processing system according to claim 11 or 12, which further comprises a sterilizing device that sterilizes the second exhaust purification filter.

[Claim 14]

The cell processing system according to any one of claims 1 and 2 to 13, wherein

the circulating apparatus further comprises an injector, provided in the enclosure, that draws in the gas to be purified by the intake air purification filter, from inside the returning member.

[Claim 15]

The cell processing system according to claim 14, wherein the intake air purification filter is situated downstream from the injector.

[Claim 16]

The cell processing system according to claim 15, which further comprises a shielding member that can be attached to the intake air purification filter so as to shield the intake air purification filter.

[Claim 17]

The cell processing system according to claim 16, wherein

the shielding member comprises

an enclosure side shielding member that can be attached to the intake air purification filter so as to shield the intake air purification filter from the enclosure interior, and

an injector side shielding member that can be attached to the intake air purification filter so as to shield the intake air purification filter from the injector.

[Claim 18]

The cell processing system according to claim 16 or 17, which further comprises a sterilizing device that sterilizes the intake air purification filter.

[Claim 19]

The cell processing system according to any one of claims 1 and 2 to 18, wherein the enclosure interior is at negative pressure compared to the returning member interior.

[Claim 20]

The cell processing system according to any one of claims 1 and 2 to 19, wherein stem cells are cultured in the cell processing apparatus.

[Claim 21]

The cell processing system according to any one of claims 1 and 2 to 20, which further comprises a sterilizing device that sterilizes a space in which the cell processing apparatus is disposed inside the enclosure.

[Claim 22]

The cell processing system according to any one of claims 1 and 2 to 21, which further comprises a temperature regulating device that regulates a temperature in a space in which the cell processing apparatus is disposed inside the enclosure.

[Claim 23]

The cell processing system according to any one of claims 1 and 2 to 22, which further comprises a carbon dioxide concentration control device that controls a carbon dioxide concentration of a space in which the cell processing apparatus is disposed inside the enclosure.

[Claim 24]

The cell processing system according to any one of claims 1 and 2 to 23, wherein the enclosure interior is demarcated into multiple zones.

[Claim 25]

A cell processing system comprising:

an enclosure,

an intake air purification filter provided in the enclosure, that purifies gas that has been drawn in from outside the enclosure,

a returning member to return gas discharged from the enclosure back to the intake air purification filter,

a circulating apparatus that circulates gas between the enclosure and the returning member, in such a manner that the gas inside the enclosure is discharged into the returning member and the gas inside the returning member is drawn into the enclosure through the intake air purification filter, and

a cell processing apparatus for processing of cells, disposed inside the enclosure,

wherein

the returning member has a shape that engages with the enclosure in a removable manner, and

the cell processing apparatus comprises:

a preintroduction cell solution-feeding channel through which a solution containing cells passes,

a factor introducing device that is connected to the preintroduction cell solution-feeding channel and introduces an inducing factor into the cells to prepare inducing factor-introduced cells,

a cell mass preparation device in which the inducing factor-introduced cells are cultured to prepare a plurality of cell masses comprising stem cells, and

an introduced cell solution-feeding channel for feeding of the inducing factor-introduced cells from the factor introducing device to the cell mass preparation device.

[Claim 26]

The cell processing system according to claim 25, wherein the returning member

comprises:

a base with a hollow interior, in contact with the bottom of the enclosure,

a first cover that allows communication between a first opening provided in the base and a ventilation unit provided on a first end face of the enclosure, and

a second cover that allows communication between a second opening provided in the base and a ventilation unit provided on a second end face of the enclosure.

[Claim 27]

The cell processing system according to claim 25, wherein the returning member is a duct.

[Claim 28]

The cell processing system according to claim 25, wherein the inducing factor-introduced cells are fed to the cell mass preparation device through a pump.

[Claim 29]

The cell processing system according to claim 25, wherein the cell mass preparation device carries out suspension culture of the inducing factor-introduced cells to prepare the plurality of cell masses comprising stem cells.