CLAIMS

1. A connector, for introducing or extracting a material to or from at least one receptacle, comprising:

- a housing extending between a distal end and a proximal end, the housing comprising, at least at one end, a pierceable seal;

- a hollow needle mounted, at least partially, within the housing between the distal end and the proximal end of the housing, a first end of the hollow needle being connected or connectable to a first receptacle, and a second end of the hollow needle facing the pierceable seal at an end of the housing; and

- an actuating mechanism acting on the housing or the hollow needle to enable the hollow needle to pierce the pierceable seal, thereby forming a communication through the pierceable seal, such that material is able to transfer through the connector; and

- an aseptic seal system comprising an aseptic membrane and a clip portion, the aseptic membrane being disposed over the pierceable seal and being operably coupled to the clip portion.

2. A connector according to claim 1, wherein the first end of the hollow needle is fluidly connected or fluidly connectable to a first receptacle, and wherein the actuating mechanism enables the hollow needle to pierce the pierceable seal to fluidly connect the second end of the hollow needle to a second receptacle.

3. A connector according to claim 1 or 2, wherein the actuating mechanism comprises a collapsible housing, wherein at least part of the housing is collapsible between the proximal end and the distal end to enable the hollow needle to pierce the pierceable seal, thereby forming a communication through the pierceable seal, such that material is able to transfer through the connector.

4. A connector according to claim 3, wherein the collapsible housing comprises an upper housing portion and a lower housing portion, the upper housing portion being axially moveable along a central longitudinal axis with respect to the lower housing portion so as to collapse with respect thereto.

5. A connector according to claim 4, wherein the upper housing portion comprises at least one actuatable lug configured to move the upper housing portion along the central longitudinal axis.

6. A connector according to claim 4 or claim 5, further comprising a collar operably coupled to the hollow needle, the collar comprising at least one actuatable lug configured to move the collar along the central longitudinal axis.

7. A connector according to claim 6, when dependent upon claim 5, further comprising an outer sleeve including a side wall having a first slot, receiving a first actuatable lug of the upper housing portion and a first actuatable lug of the collar, and a second slot, diametrically opposed to the first slot, receiving a second actuatable lug of the upper housing portion and a second actuatable lug of the collar.

8. A connector according to any one of claims 1 to 3, wherein the actuating mechanism comprises an outer sleeve configured such that at least a partial rotation of the outer sleeve causes axial translation of the hollow needle to pierce the pierceable seal thereby forming a communication through the pierceable seal, such that material is able to transfer through the connector, and optionally wherein the outer sleeve is configured such that the outer sleeve causes a releasable locking engagement between a proximal end of the outer sleeve of the connector and a portion of a second receptacle.

9. A connector according to any preceding claim, wherein the hollow needle is a double ended needle.

10. A connector according to claim 9, wherein both the proximal end and the distal end of the housing comprise a pierceable seal, wherein the double ended hollow needle is mounted within the housing, and wherein each end of the double ended hollow needle, face a pierceable seal at both the proximal end and the distal end of the housing.

11. A connector according to claim 10, wherein the first end of the double ended hollow needle comprises a pencil-point closed end and at least one port adjacent the pencil-point closed end, and wherein the second end of the double ended hollow needle comprises a bevelled open end.

12. A connector according to claim 10 or 11, wherein the actuating mechanism is configured to enable the double ended hollow needle to pierce the pierceable seal at both the proximal end and the distal end of the housing.

13. A connector according to claim 12, wherein the double ended hollow needle is biasedly mounted within the housing; and further wherein the actuating mechanism comprises an outer sleeve configured such that at least a partial rotation of the outer sleeve causes axial translation of the double ended hollow needle to pierce at least one pierceable seal, thereby forming a communication through the at least one pierceable seal.

14. A connector according to any one of claims 9 to 13, wherein the double ended hollow needle is biasedly mounted in a direction towards the proximal end of the housing by a first biasing mechanism, and wherein the double ended hollow needle is biasedly mounted in a direction towards the distal end of the housing by a second biasing mechanism.

15. A connector according to claim 14, wherein the first biasing mechanism provides a first biasing force, and the second biasing mechanism provides a second biasing force, the first biasing force and the second biasing force being approximately equal or the first biasing force being greater than the second biasing force.

16. A connector according to any preceding claim, wherein the clip portion is slidably operably connected to the connector such that the clip portion is slidable between a first configuration, in which the aseptic membrane is disposed over the or each pierceable hermetic seal, and a second configuration, in which the aseptic membrane is removed from the or each pierceable hermetic seal.

17. A system, comprising:

- a connector according to any preceding claim;
- a first receptacle detachably coupled to one end of the connector and wherein the first receptacle is connected to the first end of the hollow needle; and
- a second receptacle detachably coupled to one end of the connector and wherein the second receptacle is connected to the second end of the hollow needle.

18. A method of connecting two receptacles, comprising the steps of:

- providing a connector according to any one of claims 1 to 16;
- providing an aseptic seal actuating mechanism;

- connecting the distal end of the housing of the connector to a first receptacle, such that the first receptacle is connected to the first end of the hollow needle;
- detachably connecting the proximal end of the housing of the connector to a second receptacle comprising a pierceable seal, such that the pierceable seal of the connector is coaxially aligned with the pierceable seal of the second receptacle;
- engaging the clip portion of the aseptic seal system with the aseptic seal actuating mechanism to impart a force to the clip portion to at least partially remove the aseptic seal system from the connector and to cause at least partial removal of the aseptic membrane from the pierceable seal, thereby exposing at least a part of the pierceable seal; and
- actuating the hollow needle to pierce the pierceable seal of the housing of the connector and through the pierceable seal of the second receptacle, thereby connecting the first receptacle and the second receptacle.

19. A sterile connector, for introducing or extracting a material to or from at least one receptacle, comprising:

- a housing extending between a distal end a proximal end, the housing comprising a first pierceable seal at the distal end and a second pierceable seal at the proximal end;
- a hollow needle mounted within the housing between the distal end and the proximal end, a first end of the hollow needle facing the first pierceable seal and being connectable to a first receptacle, and a second end of the hollow needle facing the second pierceable seal and being connectable to a second receptacle; and
- an actuating mechanism acting on the housing or the hollow needle to enable the hollow needle to pierce the first pierceable seal and the second pierceable seal, thereby forming a sterile communication through the pierceable seals, such that material is able to transfer through the sterile connector; and

- an aseptic seal system comprising an aseptic membrane and a clip portion, the aseptic membrane being disposed over the second pierceable seal and being operably coupled to the clip portion.

20. A sterile package or a sterile container comprising the connector according to any one of claims 1 to 16, or the sterile connector according to claim 19.