Claims

1. A sanitary monitoring system for a medical device having a plurality of ports and an internal channel, the system comprising:

a container having a fluid pump to pump fluid into the container and at least one discharge port for the discharge of fluid from the container;

one or more conduits configured to be connected to the medical device and to be in fluid communication with the at least one discharge port;

one or more measurement devices configured to assist in determining one or more flow rates of fluid drawn through the one or more conduits; and

a status device configured to determine a sanitary condition of the medical device from the one or more flow rates.

2. The system of claim 1, wherein the container further comprises an extraction pump configured to be at or near the at least one discharge port, wherein said one or more conduits are in fluid communication with the extraction pump, and

wherein in use the fluid passes through the medical device, the one or more conduits, and is discharged through the extraction pump and the at least one discharge port.

3. The system of claim 1, wherein the one or more conduits are configured to be connected to a hollow member, said hollow member is configured to be in fluid communication with the at least one discharge port.

4. The system of claim 3, wherein the one or more measurement devices assist in determining the one or more flow rates associated with the medical device by communicating one or more pressures from the one or more conduits to the status device; and communicating one or more pressures from the hollow member to the status device.

5. The system of claim 1, wherein the status device is configured to receive information associated with the medical device, said information comprises data relating one or more aperture sizes of one or more ports of the medical device.

6. The system of claim 5, wherein the status device is configured to determine the one or more flow rates associated with the medical device based on the one or more aperture sizes and a pressure difference.

7. The system of claim 6, wherein the status device is configured to retrieve a minimum flow rate and determine the sanitary condition of the medical device by comparing the minimum flow rate with the one or more flow rates.

8. The system of claim 7, wherein the status device is configured to determine the sanitary condition of the medical device by establishing whether the minimum flow rate associated with the medical device has been reached over a period of time.

9. The system of claim 1, wherein the status device is configured to determine the sanitary condition of the medical device by establishing whether a port of the medical device is not connected to the one or more conduits.

10. The system of claim 9, wherein the status device is configured to determine the location of the medical device port that is not connected to the one or more conduits.

11. The system of claim 1, wherein the status device is configured to determine the sanitary condition of the medical device by establishing whether a port of the medical device has been connected to a wrong conduit of the one or more conduits.

12. The system of claim 1, wherein the status device is configured to alert an operator that the sanitary condition of the medical device is unsatisfactory.

13. A method for sanitary monitoring of a medical device having a plurality of ports and at least one internal channel using a sanitary system, comprising:

a container having a fluid pump to pump fluid into the container and at least one discharge port for the discharge of fluid from the container;

one or more conduits configured to be connected to the medical device and to be in fluid communication with the at least one discharge port;

one or more measurement devices configured to assist in determining one or more flow rates of fluid drawn through the one or more conduits; and

a status device configured to determine a sanitary condition of the medical device from the one or more flow rates;

wherein the method comprising the steps of:

connecting a medical device to one or more conduits;

determining one or more flow rates associated with the medical device from a fluid flow drawn through the one or more conduits; and

determining a sanitary condition of the medical device from the one or more flow rates.

14. The method of claim 13, wherein the wherein the container further comprises an extraction pump configured to be at or near the at least one discharge port, and wherein said one or more conduits are in fluid communication with the extraction pump,

wherein in use fluid passes through the medical device, the one or more conduits, and discharged through the extraction pump and the at least one discharge port.

15. The method of claim 13, wherein the step of connecting the medical device to the one or more conduits includes connecting the plurality of ports of the medical device to the one or more conduits.

16. The method of claim 13, wherein the step of determining the sanitary condition of the medical device from the one or more flow rates includes detecting whether one or more of the conduits are not connected to the plurality of ports.

17. The method of claim 16, wherein the step of detecting whether one or more of the conduits are not connected to the plurality of ports includes:

determining the number of ports associated with the medical device;

comparing the number of ports with the number of flow rates; and

determining whether one or more of the plurality of ports are not connected based on the number of ports and the number of flow rates.

18. The method of claim 17, wherein in response to detecting an unconnected port, the method further includes determining the location of the unconnected port.

19. The method of claim 18, wherein the step of determining the one or more flow rates associated with the medical device from the fluid flow drawn through the one or more conduits includes measuring one or more pressures along the one or more conduits.

20. The method of claim 13, wherein the step of determining the one or more flow rates associated with the medical device from the fluid flow drawn through the one or more conduits includes defining a pressure difference between the one or more pressures along the one or more conduits and the one or more pressures along a hollow member.

21. The method of claim 13, wherein the step of determining the sanitary condition of the medical device from the one or more flow rates includes comparing the one or more flow rates with an associated minimum flow rate.

22. The method of claim 13, wherein the step of determining the sanitary condition of the medical device from the one or more flow rates includes determining when a port of the medical device has been connected to a wrong conduit of the one or more conduits.