27. The manifold of claim 26, wherein the process control valve comprises a three-way process control valve.

28. The manifold of claim 26, further comprising any of:

(a) a second inlet control valve connected to the inlet control valve;

(b) a second outlet control valve connected to the outlet control valve;

(c) a chemical outlet valve connected to the outlet control valve; and

(d) the process control valve comprising a two-way process control valve connected to a three-way process control valve.

29. The manifold of claim 26, wherein the purge supply valve, process isolation valve, and process control valve are arranged for isolating a process line and/or an ampoule during purge.

30. The manifold of claim 29, wherein the purge supply valve comprises a three-way purge supply valve, and the process control valve comprises a three-way process control valve.

28. The manifold of claim 26, wherein the process control valve comprises a three-way process control valve.

29. The manifold of claim 26, further comprising any of:

(a) a second inlet control valve connected to the inlet control valve;

(b) a second outlet control valve connected to the outlet control valve;

(c) a chemical outlet valve connected to the outlet control valve; and

(d) the process control valve comprising a two-way process control valve connected to a three-way process control valve.

30. The manifold of claim 26, wherein the purge supply valve, process isolation valve, and process control valve are arranged for isolating a process line and/or an ampoule during purge.

31. The manifold of claim 30, wherein the purge supply valve comprises a three-way purge supply valve, and the process control valve comprises a three-way process control valve.