

15

opening and closing the interior portion of the container to atmosphere for less than ten minutes.

4. A method according to claim 3 in which the step of opening includes the step of rotating said means for opening and closing wherein the needle passes through a valve opening in said means for opening and closing within said passageway when said means for opening and closing is in one position and said passageway is closed when said means for opening and closing is in another position to close said interior portion while said liquid is above said at least a portion of said means for opening and closing.

5. The method of claim 1 in which: the step of causing liquid to flow includes the substeps of automatically opening a valve with a narrow clearance between the needle and valve just before the needle enters the container to permit the needle to pass through it; causing liquid to flow outwardly from the needle; causing the liquid to continue to flow as the needle is removed; and closing the valve as soon as the needle clears the valve opening, whereby the liquid retains its volatile material during sampling.

6. A method in accordance with claim 5 wherein the steps of opening and closing the valve include the substep of rotating a rotatable member.

7. A method in accordance with claim 5 in which the substeps of opening a valve and closing the valve are synchronized with the steps of inserting a needle and withdrawing a needle so as to reduce the communication of the interior of the container with the atmosphere.

8. A method in accordance with claim 1 in which the liquid is caused to flow from the needle laterally outwardly as the needle is withdrawn.

9. A method in accordance with claim 1 further including the step of sequentially bringing a plurality of containers into juxtaposition with at least one filling station for filling at least some of the plurality of containers.

10. A method in accordance with claim 1 in which the step of causing liquid to flow through a needle includes the step of pumping liquid with a bladder pump.

11. A method according to claim 10 in which the step of pumping liquid includes the steps of alternately pulling liquid into the bladder pump by applying negative pressure outside a liquid chamber to expand the chamber and applying positive pressure outside the chamber to compress the chamber.

12. A method according to claim 1 further including the step of causing said liquid to flow from said source into a plurality of different containers at different times.

13. A method according to claim 12 in which step of taking said containers includes the step of taking said distributor with said containers in them.

14. An apparatus for sampling liquids, comprising:

means for causing liquid to flow through a needle into a container until the container overflows;

means for removing the needle; and

means for closing the container automatically as the needle is withdrawn.

15. An apparatus according to claim 14 further including means for causing liquid to flow continuously as the needle is withdrawn.

16

16. The apparatus of claim 14 in which the means for causing liquid to flow into a container includes:

means for causing liquid to flow through a needle to the bottom of a container;

a valve with a narrow clearance between the needle and valve opening;

means for automatically opening the valve as the needle enters the container;

means for causing liquid to flow outwardly from the needle and to overflow through the valve opening;

means for pumping liquid as the needle is removed, whereby liquid continues to flow; and

means for closing the valve as soon as the needle clears the valve opening, whereby the liquid retains its volatile material during sampling.

17. Apparatus in accordance with claim 14 further including means for causing the liquid to flow from the needle laterally outwardly as the needle is withdrawn.

18. Apparatus in accordance with claim 14 in which a valve includes a valve opening in a rotatable member, wherein the container is closed and opened automatically by rotating the rotatable member as the needle moves downwardly toward the container or upwardly away from the container.

19. Apparatus in accordance with claim 14 further including means for sequentially bringing a plurality of containers and stations into juxtaposition with each other for filling of the containers.

20. Apparatus according to claim 14 in which the means for causing liquid to flow includes a bladder pump.

21. Apparatus according to claim 20 in which the bladder pump includes:

bladder means defining at least part of a liquid chamber;

an inlet for liquid;

an outlet for liquid;

a port for air;

said bladder means being able to expand and contract; and said port for air being adapted to alternately apply suction and air pressure.

22. Apparatus according to claim 14 in which:

said container includes a passageway and a container interior;

said passageway and said container interior being in communication with each other;

said passageway including an upper opening, a lower opening to said container and a valve opening portion between said upper opening and container interior;

said needle including a wall, a hollow interior within said wall and sealing means for closing all communication between said upper opening and said lower opening during at least a portion of the time while said hollow interior of said needle communicates between said interior of said container and a source of liquid.

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