CLAIMS

1. An applicator for applying a pharmaceutical preparation to a skin surface of a patient in need thereof,

said pharmaceutical preparation having viscosity in a range from 100 to 2000 centipoise at 25°C,

said applicator comprising one or more rigid side walls bounding a cavity which is open at a bottom end and closed at a top end by a top wall perpendicular to said one or more side wall to form a cap which fits over and encloses a top portion of a container and dispenser for the pharmaceutical preparation,

said side walls being configured to detachably engage with a top portion of the container or dispenser,

said closed top end of the applicator having an outer surface comprising:

a central flat and continuous face which is such that liquid cannot pass through said face, and

a peripheral ridge bounding the flat face and forming a reservoir area for retaining the pharmaceutical preparation within said reservoir area on the flat face when the pharmaceutical preparation is dispensed thereon, and

said reservoir area being formed by a solid, non-porous, non-elastic material, and having a single recess shape for receiving a single dose of the pharmaceutical preparation dispensed thereon from the pharmaceutical preparation container.

2. The applicator of claim 1 wherein the one or more rigid side walls flexibly engage with and detachably affix to the top portion of the container or dispenser.

3. The applicator of claim 1 wherein the rigid side walls comprise a ridge or protrusion formed thereon to matingly engage the top portion of the container or the dispenser.

4. The applicator of claim 1 wherein the single dose is in a range from 0.1 mL to 1 mL.

5. The applicator of claim 1 wherein the central flat and continuous face occupies 60% or more of the reservoir area.

6. The applicator of claim 1 comprising a single side wall forming a cross-sectionally circular or oval shaped applicator.

7. The applicator of claim 6 wherein the outer top surface of the top end of the applicator comprises a circular or oval ridge circumferentially bounding the central flat face of the applicator.

8. The applicator of claim 1 wherein a difference in height between an uppermost portion of the reservoir area and a lowermost portion of the reservoir area is in a range from 0.1 mm to 4.0 mm.

9. The applicator of claim 1 wherein the peripheral ridge has a top surface which is rounded.

10. The applicator of claim 1 wherein the one or more side walls of the applicator comprise indentations to facilitate gripping and handling or attaching or detaching the applicator.

11. The applicator of claim 1, wherein the applicator further comprises an overcap which covers at least the central flat surface of the applicator.

12. The applicator of claim 1 wherein the central flat continuous face of the outer surface of the applicator provides for application of the dispensed dose or doses of pharmaceutical preparation to the skin surface of the patient and the peripheral ridge serves to retain the dispensed pharmaceutical preparation within the reservoir area formed in the central flat face during administration of the pharmaceutical preparation.

13. The applicator of claim 1 wherein the skin surface is on an axilla of the patient.

14. The applicator of claim 1 wherein the preparation comprises an active pharmaceutical ingredient useful to treat or ameliorate excessive sweating or hyperhidrosis.

15. The applicator of claim 14, wherein the active pharmaceutical ingredient is sofpironium bromide.

16. The applicator of claim 1 wherein the pharmaceutical preparation is a gel.

17. A system for applying a pharmaceutically acceptable preparation to a skin surface of a patient in need thereof, said pharmaceutical preparation having viscosity in a range from 100 to 2000 centipoise at 25°C, said system comprising:

- a container for housing and storing a plurality of doses of the pharmaceutical preparation, the container having an opening at a top end for receiving and engaging a dispenser for dispensing a metered dose of the pharmaceutical preparation, and
- an applicator covering the dispenser and detachably engaging the top portion of the container or a portion of the dispenser,

said applicator comprising one or more rigid side walls bounding a cavity which is open at a bottom end and closed at a top end by a top wall perpendicular to said one or more side wall to form a cap which fits over and encloses a top portion of a container and dispenser for the pharmaceutical preparation,

said side walls being configured to detachably engage with a top portion of the container or dispenser,

said closed top end of the applicator having an outer surface comprising:

a central flat and continuous face which is such that liquid cannot pass through said face, and

a peripheral ridge bounding the flat face and forming a reservoir area for retaining the pharmaceutical preparation within said reservoir area on the flat face when the pharmaceutical preparation is dispensed thereon, and

said reservoir area being formed by a solid, non-porous, non-elastic material, and having a single recess shape for receiving a single dose of the pharmaceutical preparation dispensed thereon from the pharmaceutical preparation container.

18. The system of claim 17 further comprising an overcap which engages with the applicator and covers at least the central flat surface of the applicator.

19. The system of claim 17 wherein the container further comprises a bottom end which is open or in open communication with ambient air outside the container to allow equilibration of pressure within the container following dispensing of the pharmaceutical preparation from the container.

20. The system of claim 17 wherein the container further comprises a piston within the container which reduces storage volume of contents within the container upon each dose dispensation and compresses the contents for ultimately dispensing all the pharmaceutical preparation from the container.

21. The system of claim 17 wherein the container further comprises a collapsible inner liner disposed within the container which reduces storage volume of contents within the container upon each dose dispensation and compresses the contents for ultimately dispensing all the pharmaceutical preparation from the container.

22. The system of claim 17 wherein the container includes a bottom applicator forming a base of the container.

23. The system of claim 17 wherein the dispenser is a pump dispenser.

24. The system of claim 23 wherein the pump dispenser is a metered-dose pump dispenser.

25. An applicator system used for applying a pharmaceutical preparation for topical or transdermal administration on a body surface, said pharmaceutical preparation having viscosity in a range from 100 to 2000 centipoise at 25°C, said system comprising:

- a container configured to accommodate the pharmaceutical preparation; and
- an applicator detachably attached to the container, the applicator including a reservoir area capable of receiving a single dose of the pharmaceutical preparation to be applied on a body surface,

said reservoir area being formed by a solid, non-porous, non-elastic material, and forming a single recess shape for receiving a single dose of the pharmaceutical preparation dispensed thereon from the pharmaceutical preparation container.

26. The applicator system described in Claim 25, in which the pharmaceutical preparation is selected from the group consisting of a gel, a lotion, a cream and a liquid preparation, each having viscosity in a range from 100 to 1100 centipoise at 25°C.

27. The applicator system described in Claim 25, in which the pharmaceutical preparation has viscosity in a range from 100 to 900 centipoise at 25°C.

28. The applicator system described in any one of Claim 25 to 27, in which the pharmaceutical preparation is a preparation containing 40w/w% or more of one or a plurality of C1-C4 alcohols.

29. An applicator used for applying a pharmaceutical preparation for topical or transdermal administration on a body surface,

said pharmaceutical preparation having a viscosity in a range from about 100 to 3000 centipoise at 25°C,

said applicator including a reservoir area capable of receiving a single dose of the pharmaceutical preparation to be applied on a body surface,

said reservoir area being formed by a solid, non-porous, non-elastic material, and forming a single recess shape for receiving a single dose of the pharmaceutical preparation dispensed thereon from the pharmaceutical preparation container.

30. The applicator described in Claim 29, in which the pharmaceutical preparation is selected from the group consisting of a gel agent, a lotion agent, a cream agent and a liquid agent, each having viscosity in a range from 100 to 1500 centipoise at 25°C.

31. The applicator described in Claim 29, in which the pharmaceutical preparation has viscosity in a range from 100 to 1000 centipoise at 25°C.

32. The applicator described in any one of Claim 29 to Claim 31, in which the pharmaceutical formulation is a preparation containing 40w/w% or more of one or a plurality of C1-C4 alcohols.