CLAIMS:

1. A photodynamic therapy device for delivery of a photoactivatable composition to a treatment site, comprising:

an illuminating member comprising an illuminating element and a power source electrically connected thereto, and

an applicator cartridge comprising a reservoir adapted to receive the photoactivatable composition therein, and an applicator head, wherein the applicator cartridge is detachably connected to the illuminating member, and wherein the applicator cartridge is configured to deliver the photoactivatable composition through the applicator head to the treatment site.

2. A photodynamic therapy device for delivery of a photoactivatable composition to a treatment site, comprising:

an illuminating member comprising an illuminating element and a power source electrically connected thereto, and

an applicator cartridge comprising an applicator head for contacting a treatment surface, and

a stem for connecting the applicator cartridge to the illuminating member.

3. The photodynamic therapy as claimed in claims 1 and 2, wherein the photodynamic therapy device is a hand-held device.

4. The photodynamic therapy device as claimed in any one of claims 1 to 3, wherein the applicator cartridge comprises a mounting member for mounting the applicator cartridge on the illuminating member.

5. The photodynamic therapy device as claimed in claim 2, wherein the applicator head comprises a plurality of fingers.

6. The photodynamic therapy device as claimed in any one of claims 1 to 5, wherein the applicator head further comprises an absorbent pad.

7. The photodynamic therapy device as claimed in any one of claims 1 to 6, wherein the applicator head comprises a removable cover member adapted to cover the applicator head.

8. The photodynamic therapy device as claimed in claim 1, wherein the removable cover member is coated with a composition.

9. The photodynamic therapy device as claimed in any one of claims 4 to 8, wherein the mounting member is threaded.

10. The photodynamic therapy device as claimed in any one of claims 4 to 8, wherein the mounting member includes a clip.

11. The photodynamic therapy device as claimed in claim 1, wherein when a pressure is applied to the applicator cartridge, the photoactivatable composition in the reservoir is pushed through the applicator head and delivered to the treatment site.

12. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is light permeable.

13. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is made from a flexible material.

14. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is made from an inert material.

15. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the distance between illuminating element and the applicator head is 0-10 cm.

16. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating member further comprises a waveguide, the waveguide being connected to the illuminating element.

17. The photodynamic therapy device according to claim 16, wherein the waveguide comprises at least one optical fiber.

18. The photodynamic therapy device according to claim 16, wherein the waveguide comprises at least one light pipe.

19. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating element is a light emitting diode (LED).

20. The photodynamic therapy device according to claim 19, wherein the light emitting diode (LED) is configured to emit an actinic visible light.

21. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating element is configured to emit an actinic continuous light.

22. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating element is emitting an actinic pulsed light.

23. The photodynamic therapy device according to any one of the preceding claims, wherein the therapy device is hand mounted.

24. A method for tooth whitening comprising the steps of:

a) applying a photoactivatable composition to an applicator cartridge of the photodynamic therapy device according any one of the preceding claims,

b) topically applying the photoactivatable composition to at least one tooth, and

c) exposing the photoactivatable composition on said tooth to an actinic light for a time sufficient for the activation of the photoactivatable composition.

25. The method for tooth whitening according to claim 24, wherein the tooth is whitened by being exposed to light for a period of between 1 second and 10 minutes.

26. The method for tooth whitening according to claim 25, wherein the tooth is whitened by being exposed to light for a period of between 5 minutes and 10 minutes.

27. The method for tooth whitening according to claim 25, wherein the tooth is whitened by being exposed to light for a period of 1 minute.

28. The method for tooth whitening according to claim 25, wherein the tooth is whitened by being exposed to light for a period of 30 seconds.

29. The method for tooth whitening according to claim 24 further comprising topically applying the photoactivated composition using a photodynamic therapy device to the at least one tooth for a time sufficient for tooth whitening.

30. The method for tooth whitening according to claim 29, wherein the tooth is whitened by being exposed to light for a period of between 1 second and 10 minutes.

31. The method for tooth whitening according to claim 30, wherein the tooth is whitened by being exposed to light for a period of between 5 minutes and 10 minutes.

32. The method for tooth whitening according to claim 30, wherein the tooth is whitened by being exposed to light for a period of 1 minute.

33. The method for tooth whitening according to claim 30, wherein the tooth is whitened by being exposed to light for a period of 30 seconds.

34. A method for wound healing comprising the steps of:

a) topically applying on a patient's skin a photoactivatable composition using an applicator cartridge of the photodynamic therapy device according to any one of claims 1 to 23, and

b) exposing said skin of step a) to an actinic light for a time sufficient for the activation of the photoactivatable composition.

35. A method for wound healing comprising the step of:

a) topically applying on a patient's skin a photoactivated composition using a photodynamic therapy device as claimed in any one of claims 1 to 23 for a time sufficient for stimulation of wound healing.

36. A method for skin rejuvenation comprising the steps of:

a) topically applying on a patient's skin a photoactivatable composition using an applicator cartridge of the photodynamic therapy device according to any one of claims 1 to 23, and

b) exposing said skin of step a) to an actinic light for a time sufficient for the activation of the photoactivatable composition.

37. A method for skin rejuvenation comprising the step of:

a) topically applying on a patient's skin a photoactivated composition using a photodynamic therapy device as claimed in any one of claims 1 to 23 for a time sufficient for stimulation of skin rejuvenation.

38. A method for treating a skin condition comprising the steps of:

a) topically applying on a patient's skin a photoactivatable composition using an applicator cartridge of the photodynamic therapy device according to any one of claims 1 to 23, and

b) exposing said skin of step a) to an actinic light for a time sufficient for the activation of the photoactivatable composition.

39. A method for treating a skin condition comprising the step of:

a) topically applying on a patient's skin a photoactivated composition using a photodynamic therapy device as claimed in any one of claims 1 to 23 for a time sufficient for treating the skin condition.

40. A method for full mouth disinfection and/or photodynamic assisted oral treatment of a patient comprising the steps of:

a) applying in a patient's mouth a photoactivatable composition using an applicator cartridge of the photodynamic therapy device according to any one of claims 1 to 23, and

b) exposing said mouth of step a) to an actinic light for a time sufficient for the activation of the photoactivatable composition.

41. A method for full mouth disinfection and/or photodynamic assisted oral treatment of a patient comprising the step of:

a) topically applying in a patient's mouth a photoactivated composition using a photodynamic therapy device as claimed in any one of claims 1 to 23 for a time sufficient for effecting full mouth disinfection.

42. A method for healing neuropathic related skin lesions comprising the steps of:

a) topically applying on a patient's lesion a photoactivatable composition using an applicator cartridge of the photodynamic therapy device according to any one of claims 1 to 23, and

b) exposing said lesion of step a) to an actinic light for a time sufficient for the activation of the photoactivatable composition.

43. A method for healing neuropathic related skin lesions comprising the step of:

a) topically applying in a patient's lesion a photoactivated composition using a photodynamic therapy device as claimed in any one of claims 1 to 23 for a time sufficient for stimulating healing of the lesion.

44. The method according to any one of claims 34 to 43, wherein the exposure to actinic light is for a period of between 60 seconds and 5 minutes.

45. The method according to claim 43, wherein the exposure to actinic light is for a period of between 1 second and 5 minutes per cm^2 of an area to be treated.

46. The method according to any one of claims 34 to 43, wherein said actinic light is in the visible spectrum.

CLAIMS

1. A photodynamic therapy device for delivery of a photoactivatable composition to a treatment site, the device comprising:

an illuminating member comprising an illuminating element and a power source electrically connected thereto, and

an applicator cartridge comprising a reservoir adapted to receive a composition comprising at least one component of the photoactivatable composition therein, and an applicator head, wherein the applicator cartridge is detachably connected to the illuminating member, and wherein the applicator head comprises one or more pores for passing the composition from the reservoir through the applicator head.

2. The photodynamic therapy device as claimed in claim 1, wherein the device is a hand-held device.

3. The photodynamic therapy device as claimed in claim 1 or claim 2, wherein the applicator cartridge comprises a mounting member for mounting the applicator cartridge on the illuminating member.

4. The photodynamic therapy device as claimed in claim 3, wherein the mounting member is threaded.

5. The photodynamic therapy device as claimed in claim 3 or claim 4, wherein the mounting member includes a clip.

6. The photodynamic therapy device as claimed in any one of claims 1 to 5, wherein when a pressure is applied to the applicator cartridge, the composition in the reservoir is pushed through the one or more pores of the applicator head.

7. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the distance between the illuminating element and the applicator head is 0-10 cm.

8. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating member further comprises a waveguide, the waveguide being connected to the illuminating element.

9. The photodynamic therapy device according to claim 8, wherein the waveguide comprises at least one optical fiber.

10. The photodynamic therapy device according to claim 9, wherein the waveguide comprises at least one light pipe.

11. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating element is a light emitting diode (LED).

12. The photodynamic therapy device according to claim 11, wherein the light emitting diode (LED) is configured to emit an actinic visible light.

13. The photodynamic therapy device according to any one of the preceding claims, wherein the illuminating element is configured to emit an actinic continuous light.

14. The photodynamic therapy device according to any one of claims 1 to 12, wherein the illuminating element is configured to emit an actinic pulsed light.

15. The photodynamic therapy device according to any one of the preceding claims, wherein the device is hand mountable or finger mountable.

16. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the reservoir contains the composition comprising the at least one component of the photoactivatable composition therein, the at least one component being selected from a photoactivator and an oxidant.

17. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is light permeable in order to allow light from the illuminating element to pass therethrough.

18. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is made from a flexible material.

19. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator cartridge is made from an inert material.

20. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator head comprises a plurality of fingers.

21. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator head further comprises an absorbent pad.

22. The photodynamic therapy device as claimed in any one of the preceding claims, wherein the applicator head comprises a removable cover member adapted to cover the applicator head.

23. The photodynamic therapy device as claimed in claim 22, wherein the removable cover member is coated with a composition comprising at least one component of the photoactivatable composition.

24. The photodynamic therapy device as claimed in any of claims 1 to 23, wherein the at least one component is selected from a photoactivator or an oxidant.

25. The photodynamic therapy device as claimed in any of claims 22 to 24, wherein the removable cover member is coated with a photoactivator and the reservoir contains the oxidant.

26. The photodynamic therapy device as claimed in any one of claims 22 to 25, wherein the removable cover member is impermeable to light.

27. An applicator cartridge for delivery of a photoactivatable composition to a treatment site, the applicator cartridge comprising:

an applicator head, and

a reservoir adapted to receive a composition comprising at least one component of the photoactivatable composition therein;

wherein the applicator head comprises one or more pores for passing the composition from the reservoir through the applicator head.

28. The applicator cartridge as claimed in claim 27, further comprising a mounting portion for mounting of the applicator cartridge to an illuminating member.

29. The applicator cartridge as claimed in claim 27 or claim 28, wherein the reservoir contains a composition comprising at least one component of the photoactivatable

composition therein, the at least one component being selected from a photoactivator and an oxidant.

30. The applicator cartridge as claimed in any one of claims 27 to 29, wherein the applicator cartridge is light permeable.

31. The applicator cartridge as claimed in any one of claims 27 to 30, wherein the applicator cartridge is made from a flexible material.

32. The applicator cartridge as claimed in any one of claims 27 to 31, wherein the applicator cartridge is made from an inert material.

33. The applicator cartridge as claimed in any one claims 27 to 32, wherein the applicator head comprises a plurality of fingers.

34. The applicator cartridge as claimed in any one of claims 27 to 33, wherein the applicator head further comprises an absorbent pad.

35. The applicator cartridge as claimed in any one of claims 27 to 34, wherein the applicator head comprises a removable cover member adapted to cover the applicator head.

36. The applicator cartridge as claimed in claim 35, wherein the removable cover member is coated with a composition comprising at least one component of the photoactivatable composition.

37. The applicator cartridge as claimed in any one of claims 27 to 36, wherein the at least one component comprises a photoactivator or an oxidant.

38. The applicator cartridge as claimed in any one of claims 27 to 37, wherein the removable cover member is impermeable to light.

39. The applicator cartridge as claimed in any one of claims 27 to 38, wherein when a pressure is applied to the applicator cartridge, the composition in the reservoir is pushed through the one or more pores of the applicator head.

40. Use of an applicator cartridge and/or a photodynamic therapy device according to any one of claims 1 to 39 for tooth whitening.