Claims

1. An amphoteric surfactant for use in the prevention and/or treatment of vaginal infections.

2. The amphoteric surfactant according to claim 1, which is an amphoacetate, an amphodiacetate, an amphopropionate, an amphodipropionate, a hydroxysultaine, or any mixtures thereof.

3. The amphoteric surfactant according to claims 1 and/or 2, which is a C_6-C_{24} alkylamphoacetate, preferably a cocoamphoacetate or lauroamphoacetate, more preferably sodium cocoamphoacetate or sodium lauroamphoacetate, a C_6-C_{24} alkylamphopropionate, preferably a cocoamphopropionate, more preferably sodium cocoamphopropionate, a C_6-C_{24} alkylamidopropyl hydroxysultaine, preferably cocoamidopropyl hydroxysultaine or a C_6-C_{24} amphodiacetate, preferably a cocoamphodiacetate, more preferably sodium cocoamphodiacetate.

4. The amphoteric surfactant according to any one of claims 1 to 3, wherein the vaginal infection is characterized by the presence of a (pathogenic) vaginal biofilm.

5. The amphoteric surfactant according to any one of claims 1 to 4, wherein the vaginal infection is vulvovaginal candidiasis or bacterial vaginosis.

6. The amphoteric surfactant according to claims 4 and/or 5, wherein the vaginal biofilm is caused by *Candida albicans* and *Candida* spec. and/or *Gardnerella vaginalis*, *Atopobium vaginae*, *Mobiluncus* spp., *Prevotella* spp., and *Mykoplasma hominis*.

7. The amphoteric surfactant according to any one the claims 1 to 6, wherein the amphoteric surfactant is applied in an amount of 0.01 to 500 mg per dose, preferably of 0.1 to 250 mg per dose, more preferably of 1 to 100 mg per dose.

8. The amphoteric surfactant according to any one the claims 1 to 7, wherein the amphoteric surfactant is applied from once a day to twice a week.

9. The amphoteric surfactant according to any one of claims 1 to 8, wherein the amphoteric surfactant is applied in form of an ointment, a cream, a gel, a tablet, a capsule, an ovule, a suppository, a solution, a suspension, a foam, a film or liposomal composition or being contained within a vaginal ring, tampon, suppository, sponge, pillow, puff, or osmotic pump system.

10. The amphoteric surfactant according to any one of claims 1 to 9, wherein the amphoteric surfactant is topically applied to the vagina and/or the vulva.

11. A pharmaceutical composition comprising:
(a) an amphoteric surfactant according to any one of claims 1 to 10 as active ingredient for the prevention and/or treatment of the vaginal infections, and
(b) a pharmaceutically acceptable excipient.

12. The pharmaceutical composition according to claim 11, which comprises 0.1 to 15 wt. % of the amphoteric surfactant, based on the total weight of the pharmaceutical composition.

13. The pharmaceutical composition according to claim 11 and/or 12, wherein the pharmaceutically acceptable excipient is selected from the group consisting of solvents, gelling agents, buffers, non amphoteric surfactants, detergents, oils, alcohols, emulsifiers, solubilizers, humectants, fillers, carriers and bioadhesives.

14. The pharmaceutical composition according to any one of claims 11 to 13 further comprising an additional therapeutically active substance.

15. The pharmaceutical composition according to claim 14, wherein the additional therapeutically active substance is an antibiotic, preferably selected from the group of metronidazole, clindamycin, moxifloxacin, or an antiseptic like povidone-iodine, hexitidine or octinidine.

Claims

1. Use of an amphoteric surfactant in the manufacture of a medicament for the prevention and/or treatment of vaginal infections, wherein the vaginal infection is characterized by the presence of a pathogenic vaginal biofilm.

2. The use according to claim 1, wherein the amphoteric surfactant is an amphoacetate, an amphodiacetate, an amphopropionate, an amphodipropionate, a hydroxysultaine, or any mixtures thereof.

3. The use according to claims 1 and/or 2, wherein the amphoteric surfactant is a C_6-C_{24} alkylamphoacetate, preferably a cocoamphoacetate or lauroamphoacetate, more preferably sodium cocoamphoacetate or sodium lauroamphoacetate, a C_6-C_{24} alkylamphopropionate, preferably a cocoamphopropionate, more preferably sodium cocoamphopropionate, a C_6-C_{24} alkylamidopropyl hydroxysultaine, preferably cocoamidopropyl hydroxysultaine or a C_6-C_{24} amphodiacetate, preferably a cocoamphodiacetate, more preferably sodium cocoamphodiacetate.

4. The use according to any one of claims 1 to 3, wherein the vaginal infection is vulvovaginal candidiasis or bacterial vaginosis.

5. The use according to any one of claims 1 to 4, wherein the vaginal biofilm is caused by *Candida albicans* and *Candida* spec. and/or *Gardnerella vaginalis*, *Atopobium vaginae*, *Mobiluncus* spp., *Prevotella* spp., and *Mykoplasma hominis*.

6. The use according to any one the claims 1 to 5, wherein the amphoteric surfactant is in an amount of 0.01 to 500 mg per dose, preferably of 0.1 to 250 mg per dose, more preferably of 1 to 100 mg per dose.

7. The use according to any one the claims 1 to 6, wherein the medicament is to be applied from once a day to twice a week.

8. The use according to any one of claims 1 to 7, wherein the medicament is in the form of an ointment, a cream, a gel, a tablet, a capsule, an ovule, a suppository, a solution, a suspension, a foam, a film or liposomal composition or being contained within a vaginal ring, tampon, suppository, sponge, pillow, puff, or osmotic pump system.

9. The use according to any one of claims 1 to 8, wherein the medicament is to be topically applied to the vagina and/or the vulva.

10. Use of a pharmaceutical composition in the manufacture of a medicament for the prevention and/or treatment of vaginal infections, wherein the vaginal infection is characterized by the presence of a pathogenic vaginal biofilm, wherein the pharmaceutical composition comprises:
(a) an amphoteric surfactant as active ingredient, and
(b) a pharmaceutically acceptable excipient.

11. The use according to claim 10, wherein the pharmaceutical composition comprises 0.1 to 15 wt. % of the amphoteric surfactant, based on the total weight of the pharmaceutical composition.

12. The use according to claim 10 and/or 11, wherein the pharmaceutically acceptable excipient is selected from the group consisting of solvents, gelling agents, buffers, non amphoteric surfactants, detergents, oils, alcohols, emulsifiers, solubilizers, humectants, fillers, carriers and bioadhesives.

13. The use according to any one of claims 10 to 12 wherein the pharmaceutical composition further comprises an additional therapeutically active substance.

14. The use according to claim 13, wherein the additional therapeutically active substance is an antibiotic, preferably selected from the group of metronidazole, clindamycin, moxifloxacin, or an antiseptic like povidone-iodine, hexitidine or octinidine.