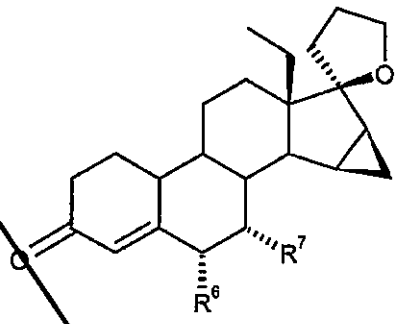
Patent claims

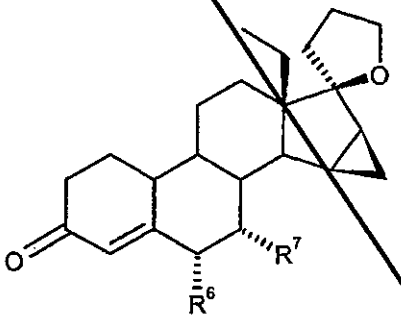
1. Intrauterine use of 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of the general formula (1),



formula (1)

wherein R^6 and R^7 are a hydrogen atom or together are an α-methylene group.

2. Intrauterine system comprising 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one of the general formula (1)



formula (1)

wherein R^6 and R^7 are a hydrogen atom or together an α-methylene group.

3. Intrauterine system according to Claim 2, comprising 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one.

4. Intrauterine system according to Claim 2, comprising 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one.

5. Intrauterine system according to Claim 3, characterized in that a daily dose of 1-200 µg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

6. Intrauterine system according to Claim 5, characterized in that a daily dose of 1-100 µg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

7. Intrauterine system according to Claim 6, characterized in that a daily dose of 2-50 µg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

8. Intrauterine system according to Claim 4, characterized in that a daily dose of 2-500 µg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

9. Intrauterine system according to Claim 8, characterized in that a daily dose of 2-200 µg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

10. Intrauterine system according to Claim 9, characterized in that a daily dose of 5-100 µg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

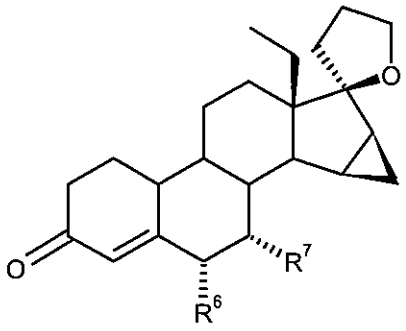
11. Intrauterine system according to any of Claims 2-10 for use in contraception.

12. Intrauterine system according to any of Claims 2-10 for use in gynaecological treatment, except for the treatment of menorrhagia and other uterine haemorrhages.

13. Use of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one in contraception and gynaecological treatment, except for the treatment of menorrhagia and other uterine haemorrhages.

CLAIMS

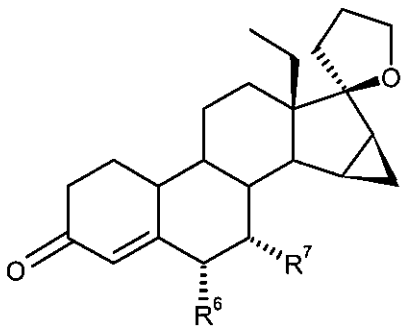
1. 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of the general formula (1),



formula (1)

wherein R^6 and R^7 are a hydrogen atom or together are an α-methylene group for intraunterine use.

2. Intrauterine system comprising 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one of the general formula (1)



formula (1)

wherein R^6 and R^7 are a hydrogen atom or together an α-methylene group.

3. Intrauterine system according to Claim 2, comprising 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one.

4. Intrauterine system according to Claim 2, comprising 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one.

5. Intrauterine system according to Claim 3, characterized in that a daily dose of 1-200 μg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

6. Intrauterine system according to Claim 5, characterized in that a daily dose of 1-100 μg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

7. Intrauterine system according to Claim 6, characterized in that a daily dose of 2-50 μg of 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is released from the system.

8. Intrauterine system according to Claim 4, characterized in that a daily dose of 2-500 μg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

9. Intrauterine system according to Claim 8, characterized in that a daily dose of 2-200 μg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

10. Intrauterine system according to Claim 9, characterized in that a daily dose of 5-100 μg of 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is released from the system.

11. 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one for use in the treatment of endometriosis, endometrial hyperplasia, inflammation of the endometrium (endometritis), uterine-based pain or dysmenorrhoea, except in the treatment of menorrhagia or other uterine haemorrhage.

12. 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one for use according to claim 11, wherein 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is included in an intrauterine system.

13. 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one for use as a contraceptive whereas 18-methyl-15β,16β-methylene-19-nor-20-spirox-4-en-3-one is included in an intrauterine system.

14. 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one for use in the treatment of endometriosis, endometrial hyperplasia, inflammation of the endometrium (endometritis), uterine-based pain or dysmenorrhoea, except in the treatment of menorrhagia or other uterine haemorrhage.

15. 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one for use according to claim 14, wherein 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is included in an intrauterine system.

16. 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one for use as a contraceptive whereas 18-methyl-6α,7α,15β,16β-dimethylene-19-nor-20-spirox-4-en-3-one is included in an intrauterine system.

17. 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of general formula (1) according to claim 1 for use in the treatment of endometriosis, endometrial hyperplasia, inflammation of the endometrium (endometritis), uterine-based pain or dysmenorrhoea, except in the treatment of menorrhagia or other uterine haemorrhage.

18. 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of general formula (1) according to claim 1 for use according to claim 17 wherein 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of the general formula (1) according to claim 1 is included in an intrauterine system.

19. 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of general formula (1) according to claim 1 for use as a contraceptive whereas 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of general formula (1) according to claim 1 is included in an intrauterine system.

20. 18-Methyl-15ß,16ß-methylene-19-nor-20-spirox-4-en-3-ones of general formula (1) according to claim 1 for use in an intrauterine system.