

8. The process of claim 1 wherein the concentration of the dispersion is achieved by any one of the methods selected from the following:

diafiltration
dialysis and
evaporation.

9. The process of claim 1 wherein the nanoparticulate dispersion is characterized by a Z-average particle diameter less than 300 nm as measured by photon correlation spectroscopy.

10. The process of claim 1 wherein the pharmaceutical agent is an X-ray contrast agent.

11. The process of claim 1 wherein the nanoparticulate pharmaceutical agent is concentrated to contain anywhere between 2 to 20% of the agent.

12. The method of claim 1 practiced in any mode selected from the following:

a batch process,
a semicontinuous batch process, and
a continuous process.

13. The method of claim 1 wherein the anionic surface active surface modifier is present at a level of 0.1 to 40% by weight of the pharmaceutical agent.

14. The method of claim 1 wherein the anionic surface active surface modifier is present at a level of 0.1 to 20% by weight of the pharmaceutical agent.

15. The process of claim 1 wherein step 3 is followed by step 4 which removes the salts by diafiltration or dialysis and step 5 wherein the dispersion is concentrated to desired concentration of the agent dispersion.

16. A microprecipitation process of preparing nanoparticulate dispersions of a pharmaceutical agent comprising:

continuously providing a first solution of a pharmaceutical agent in aqueous base, a second flow of an aqueous solution comprising at least one nonionic surface active surface modifier and at least one anionic surface active surface modifier and,

continuously providing a third flow of an acid solution at a constant desired pH to form a nonparticulate pharmaceutical agent dispersion, followed by a step of removal of the formed salts and then a step of concentrating the said dispersion to a desired level,

wherein, the said nonionic surface active surface modifier is structurally on a molecular basis at least 75% identical to the chemical structure of the pharmaceutical agent.

17. The method of claim 16 wherein step 4 comprises diafiltration.

18. The method of claim 16 wherein step 4 comprises dialysis.

19. The process of claim 16 wherein the pharmaceutical agent is selected from:

therapeutic agent and
diagnostic agent.

20. The process of claim 16 wherein the nanoparticulate dispersion is characterized by a Z-average particle diameter less than 400 nm as measured by photon correlation spectroscopy.

21. The process of claim 16 wherein the base is selected from any one or a combination of the following:

NaOH
KOH
CsOH
trialkyl amines and
pyridine.

22. The process of claim 16 wherein the neutralizing acid is selected from:

a weak acid and
a strong acid.

23. The process of claim 16 wherein the neutralizing acid is selected from any one of the following:

HCl
HNO₃
HClO₄
H₂SO₄
formic acid
propionic acid
acetic acid and
butyric acid.

24. The process of claim 16 wherein the surface modifier is a mixture selected from the following:

an anionic surfactant
a nonionic surfactant
a polymeric molecule and
an oligomeric molecule.

25. The process of claim 16 wherein the concentration of the dispersion is achieved by any one of the methods selected from the following:

diafiltration
dialysis and
evaporation.

26. The process of claim 16 wherein the nanoparticulate dispersion is characterized by a Z-average particle diameter less than 300 nm as measured by photon correlation spectroscopy.

27. The process of claim 16 wherein the pharmaceutical agent is an X-ray contrast agent.

28. The process of claim 16 wherein the nanoparticulate pharmaceutical agent is concentrated to contain anywhere between 2 to 20% of the agent.

29. The method of claim 16 practiced in any mode selected from the following:

a batch process,
a semicontinuous batch process, and
a continuous process.

30. The method of claim 16 wherein one of the surface modifiers is base degradable.

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