

## **Topic list for Pharmaceutical Technology 4 2024**

1. Pharmaceutical technological relevance of bioavailability and biocompatibility
2. Pharmaceutical technological, biopharmaceutical and quality assurance relevance and methods of drug dissolution examinations
3. Pharmaceutical technological, biopharmaceutical and relevance of development of generic medicines
4. Micro sized dosage forms (microcapsules, micropellets)
5. Molecular dispersions, cyclodextrins, polymer conjugates
6. Liposomes, cochleates, dendrimers, niosomes, quantum dots and nanotubes
7. Pharmaceutical technological and biopharmaceutical relevance of rapidly disintegrating and quickly dissolving drug delivery systems
8. Pharmaceutical technological and biopharmaceutical relevance of sustained drug delivery systems
9. Pharmaceutical technological and biopharmaceutical relevance of drug delivery systems controlled in time and space
10. Pharmaceutical technological and biopharmaceutical relevance of inhalational liquid drug delivery systems
11. Pharmaceutical technological and biopharmaceutical relevance of inhalational solid drug delivery systems
12. Technology of injections (e.g. manufacturing steps, examinations...)
13. Technology of infusions (e.g. classification, manufacturing, examinations...)
14. Pharmaceutical technological and biopharmaceutical relevance of rectal drug delivery systems
15. Pharmaceutical technological and biopharmaceutical relevance of ocular drug delivery systems
16. Pharmaceutical technological and biopharmaceutical relevance of nasal and otological drug delivery systems
17. Pharmaceutical technological and biopharmaceutical relevance of dermal and transdermal drug delivery systems
18. Pharmaceutical technological and biopharmaceutical relevance of solubility and dissolving rate
19. Pharmaceutical technological interactions and incompatibilities

20. Operations and procedures of mixing and dispersing
21. Operations and procedures of heat transfer
22. Operations and procedures of distillation and evaporation
23. Operations and procedures of filtering, sedimentation and centrifugation
24. Pharmaceutical technological and biopharmaceutical relevance of aseptic preparation
25. Operations and procedures of sterilizing, sterile dosage forms
26. Pharmaceutical technological and biopharmaceutical relevance of emulsions
27. Pharmaceutical technological and biopharmaceutical relevance of emulsifying agents
28. Pharmaceutical technological and biopharmaceutical relevance of suspensions
29. Classification and preparation of ointments
30. Excipients and examinations of ointments
31. Structural, rheological properties of ointments, galenicals (basic preparations)
32. Theory of drying, operation and processes of drying
33. Operation of crystallization
34. Operation of milling and sieving
35. Operation of fluidization
36. Operation of granulation
37. Pharmaceutical technological and biopharmaceutical relevance of tableting, operation of compression
38. Excipients of tablets
39. Examinations of tablets
40. Pharmaceutical technological and biopharmaceutical relevance of sugar coating
41. Pharmaceutical technological and biopharmaceutical relevance of film coating
42. Pharmaceutical technological and biopharmaceutical relevance of capsules
43. Operation of extraction, extrusion and their pharmaceutical technological and biopharmaceutical relevance
44. Pharmaceutical technological relevance of stability of medicines
45. Packaging of medicines
46. Pharmaceutical technological and biopharmaceutical relevance of quality assurance and quality control
47. Pharmaceutical technological and biopharmaceutical relevance of validation
48. Technology of veterinary preparations