

WHAT IS CLAIMED:

1. A method for measuring a carfilzomib concentration of a sample comprising carfilzomib comprising the steps of
diluting the sample with a diluent comprising water and less than 50% by volume acetonitrile to form an analytical sample; and
subjecting the analytical sample to high performance liquid chromatography (HPLC) to determine the carfilzomib concentration in the sample.
2. The method of claim 1, wherein the sample is obtained from carfilzomib compounding.
3. The method of claim 1, wherein the sample is obtained from a bulk lyophilization solution of carfilzomib.
4. The method of claim 1, wherein the sample is a solubilization sample.
5. The method of claim 1, wherein the sample is a post-dilution sample.
6. The method of any one of claims 1 to 5, wherein the diluent comprises water and 0% to 45% by volume acetonitrile.
7. The method of claim 6, wherein the diluent comprises water and 25% to 40% by volume acetonitrile.
8. The method of claim 7, wherein the diluent comprises water and 30% by volume acetonitrile.
9. The method of claim 7, wherein the diluent comprises water and 40% by volume acetonitrile.
10. The method of any one of claims 1 to 9, wherein the method comprises a relative standard deviation (RSD) value of less than 2%.
11. The method of claim 10, wherein the RSD is less than 1%.
12. The method of claim 10, wherein the RSD is less than 0.5%.
13. The method of any one of claims 1 to 12, wherein the carfilzomib concentration is 3 mg/mL to 8 mg/mL.
14. The method of claim 13, wherein the carfilzomib concentration is 5 mg/mL to 6 mg/mL.
15. The method of any one of claims 1 to 14, wherein the temperature of the analytical sample is 2°C to 8°C prior to HPLC analysis.
16. The method of any one of claims 1 to 14, wherein the temperature of the analytical sample is at room temperature prior to HPLC analysis.
17. The method of any one of claims 3 to 16, further comprising the step of preparing a lyophilizate from the sample.
18. The method of claim 17, wherein the lyophilizate contains 10 mg carfilzomib.

19. The method of claim 17, wherein the lyophilizate contains 30 mg carfilzomib.
20. The method of claim 17, wherein the lyophilizate contains 60 mg carfilzomib.