

WE CLAIM:

1. A pharmaceutical composition comprising an insulin and a polyphosphate compound selected from the group consisting of pyrophosphate, triphosphate, trimetaphosphate and tetraphosphate, provided that the composition does not contain either a saccharide multimer or EDTA.
2. The pharmaceutical composition of claim 1 wherein the polyphosphate compound is triphosphate.
3. The pharmaceutical composition of claim 2 wherein the concentration of triphosphate is from about 5 to about 50 mM.
4. The pharmaceutical composition of claim 2 wherein the concentration of triphosphate is from about 10 to about 30 mM.
5. The pharmaceutical composition of claim 2 wherein the concentration of triphosphate is from about 20 to about 25 mM.
6. The pharmaceutical composition of claim 2 wherein the concentration of triphosphate is about 20 mM.
7. The pharmaceutical composition of any of claims 1-6 further comprising zinc.
8. The pharmaceutical composition of claim 7 wherein the zinc concentration is from about 0.2 to about 5 mM.
9. The pharmaceutical composition of any of claims 1-8 further comprising a tonicity agent.
10. The pharmaceutical composition of claim 9 wherein the tonicity agent is glycerol.
11. The pharmaceutical composition of any of claims 1-10 further comprising one or more preservatives.
12. The pharmaceutical composition of claim 11, wherein the one or more preservatives are selected from the group consisting of phenol, meta-cresol, and benzyl alcohol.
13. The pharmaceutical composition of any one of Claims 1-12, wherein the insulin is selected from the group consisting of human insulin, insulin lispro, insulin aspart and insulin glulisine.
14. The pharmaceutical composition of any one of Claims 1-13, wherein the insulin concentration is from about 40 to about 500 IU/mL.

15. The pharmaceutical composition of any one of Claims 1-14, wherein the insulin concentration is from about 100 to about 200 IU/mL.
16. A method of treating diabetes comprising administering to a human in need thereof an effective dose of the pharmaceutical composition of any one of Claims 1-15.
- 5 17. A pharmaceutical composition of any one of Claims 1-15 for use as a medicament.
18. A pharmaceutical composition of any one of Claims 1-15 for use in the treatment of diabetes.
19. An article of manufacture comprising any one of the pharmaceutical compositions of Claims 1-15.
- 10 20. The article of manufacture of Claim 19 which is a multi-use vial.
21. The article of manufacture of Claim 20 which is a re-usable pen injector.
22. The article of manufacture of Claim 21 which is a pre-filled, disposable pen.
23. The article of manufacture of Claim 22 which is an autoinjector.
24. The article of manufacture of Claim 23 which is a pump for CSII.