

Electrospraying for regulated delivery of active substances

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Electrospraying is efficient technology for encapsulation of diverse bioactive molecules. However, the technology is well adapted, current methods suffer from low production rate limiting commercial use of particles. InoCure s.r.o. is founder of μ Sphere technology for production of nano- and microparticles based on needleless electrospraying. In the current proposal, we are showing potential on electrosprayed nano- and microparticles as a drug delivery system for proteins. The study analyzes methods for enzyme stabilization and compares the stability in core/shell and monolithic formulations. In addition, development of particles with sequential release properties is described on model of different growth factors and small molecules. The results indicate that needleless methods enable efficient production of microparticles for use in advanced drug delivery therapies.

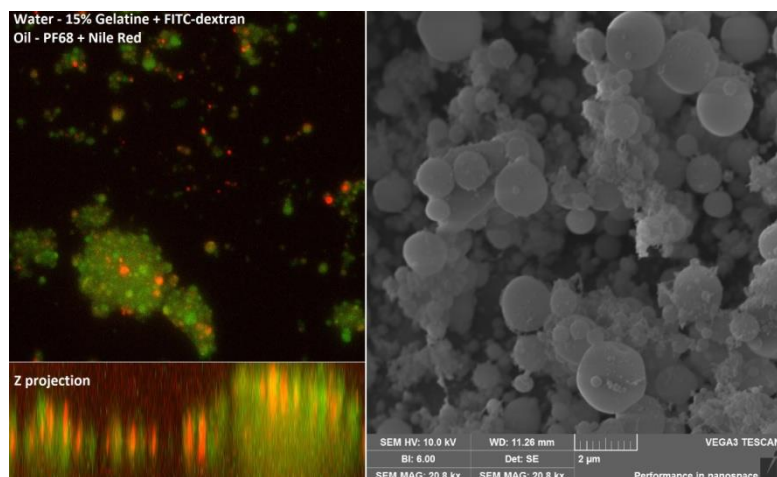


Figure: Morphology of gelatine particles produced by μ Sphere method.