Case study – Spray for gel-like hemostatic

Project

Airless spray delivering topical hemostatic agent during **surgery**

Implantable medical device **class III CE marked**

Nozzle connected to the customer syringe

Challenges

- **Highly viscous product** (gel- 4000Pa.s) with **shear thinning** behaviour
- Need a spray deposition **to increase** its intra-surgical **efficiency** at a **low continuous flow rate** (0.15mL/s)
- **Airless** spray nozzle
- Force to apply on the syringe as low as possible
- Failed customer internal 2y project

Achievements

- All spray specifications achieved
  - *Spray of viscous gel at **0.15mL/s** – Min. pressure : 22bars*
  - ***Spot size** of about **2cm** at a distance of 10cm*
- Product **maintains its viscoelastic properties** after spraying
- Spray gun **functional prototype**
- Spray testing during **preclinical study**

Benefits

60% product savings ➔ expand market reach

Time saving during surgery procedure with a user friendly device

New technology integrated in 12 months/ POC in few months

Now extrapolated as a **platform** for other products