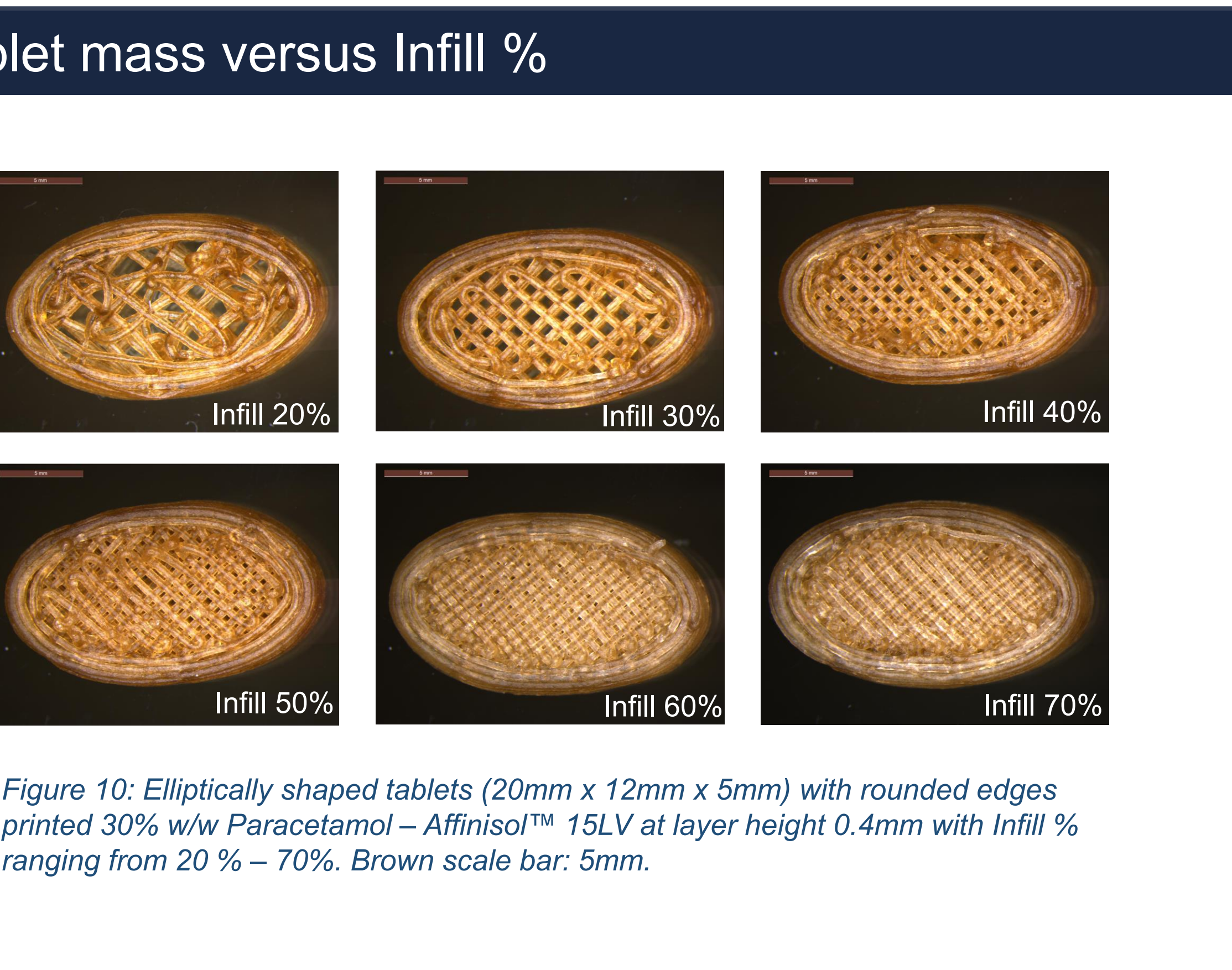
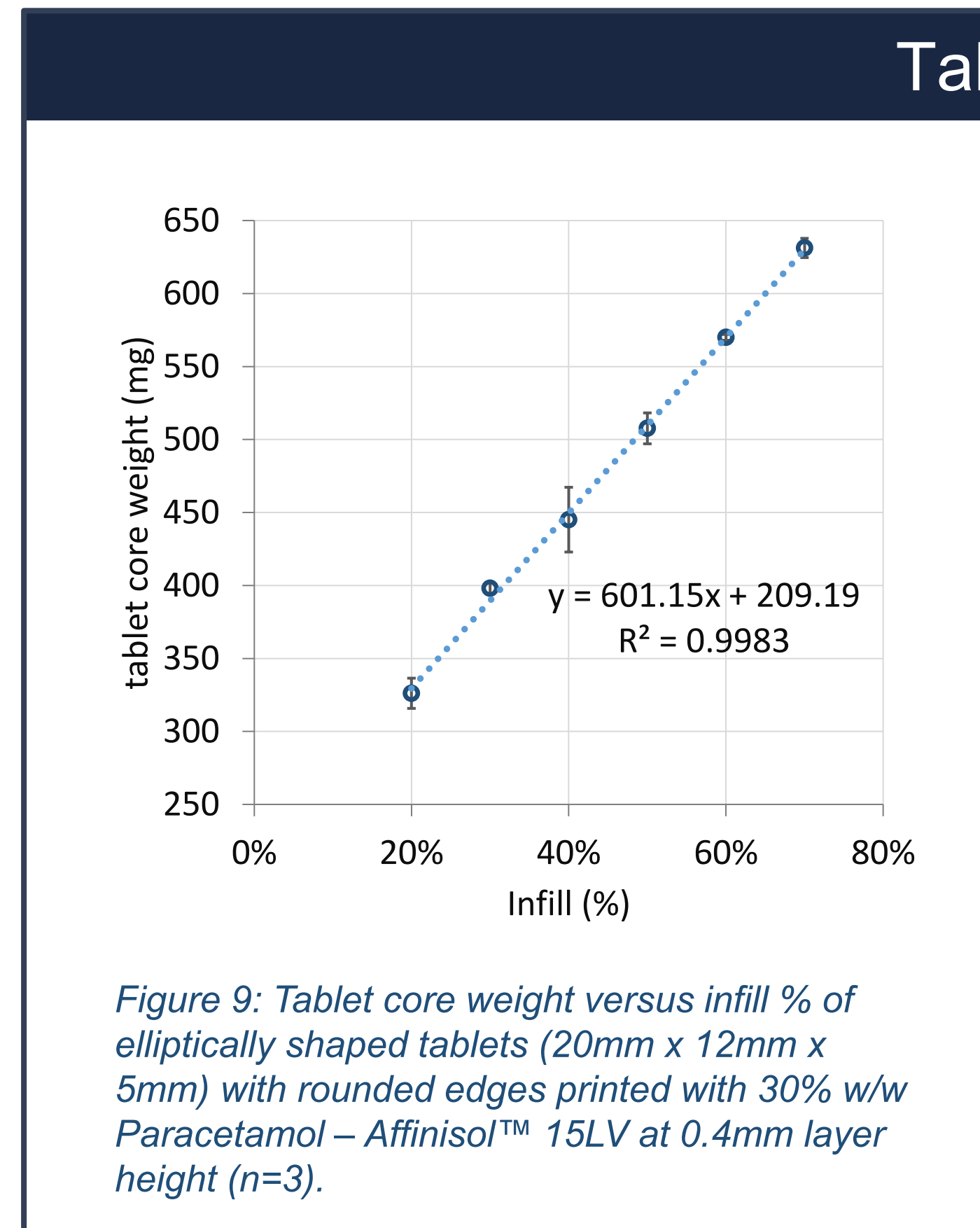
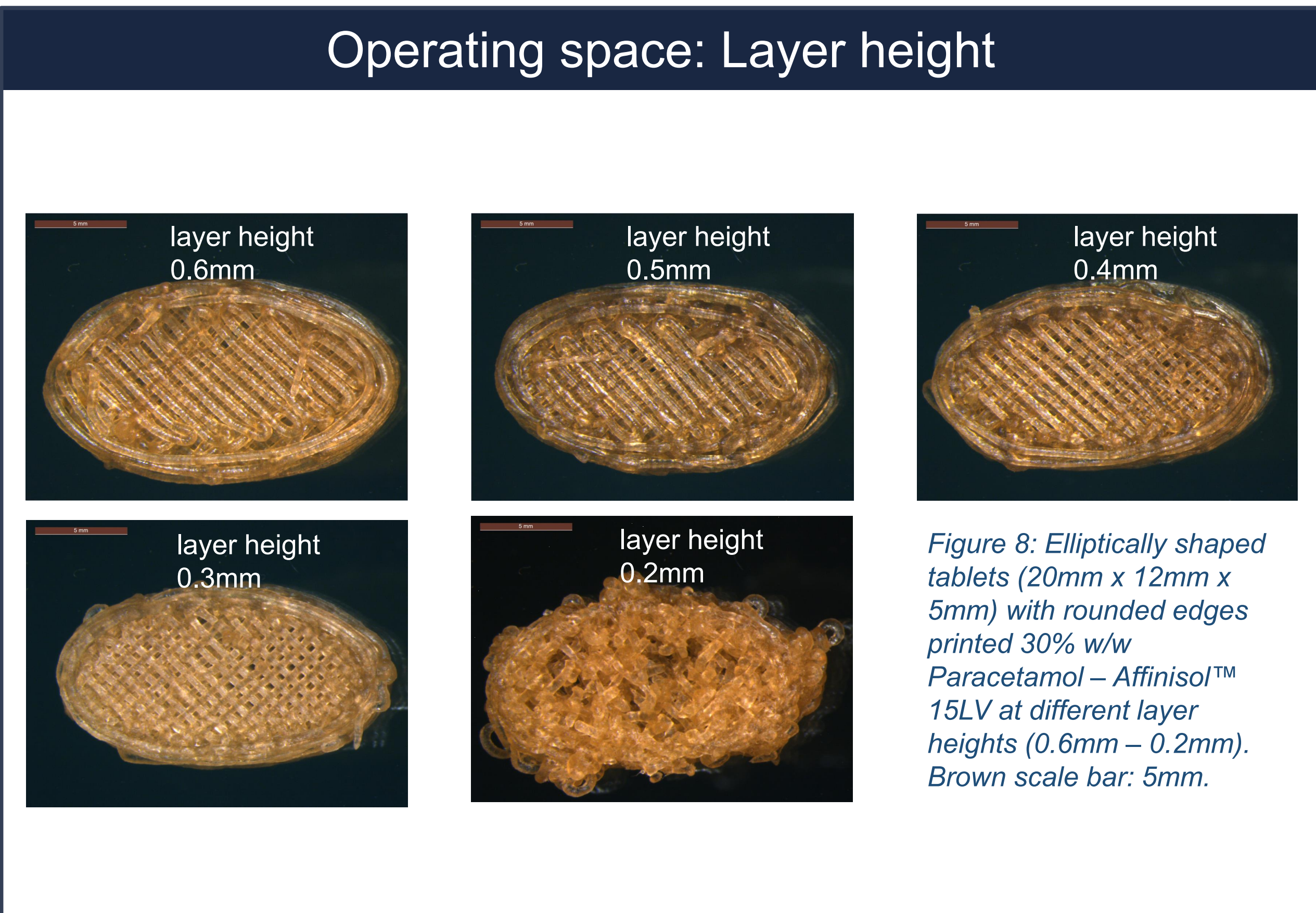
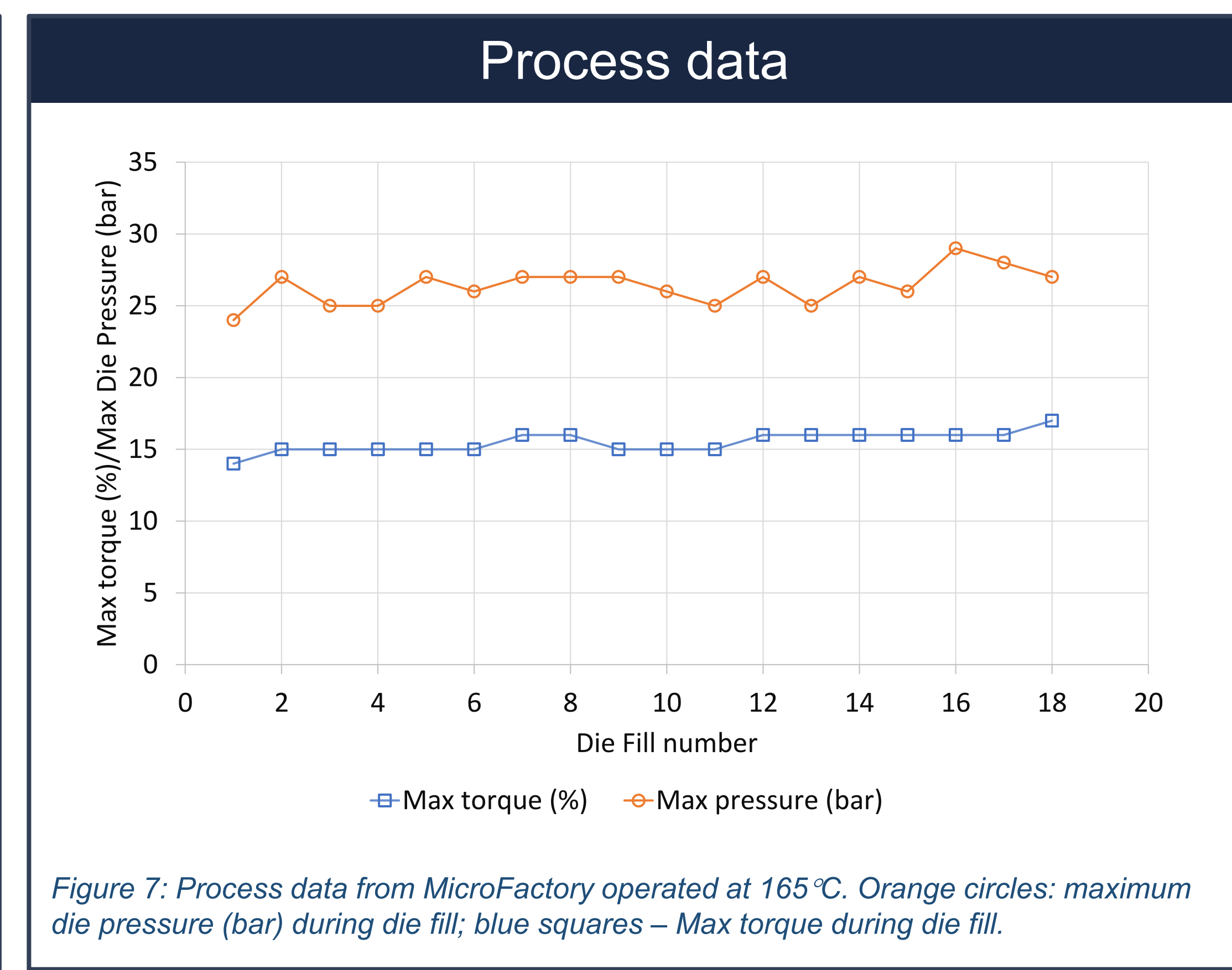
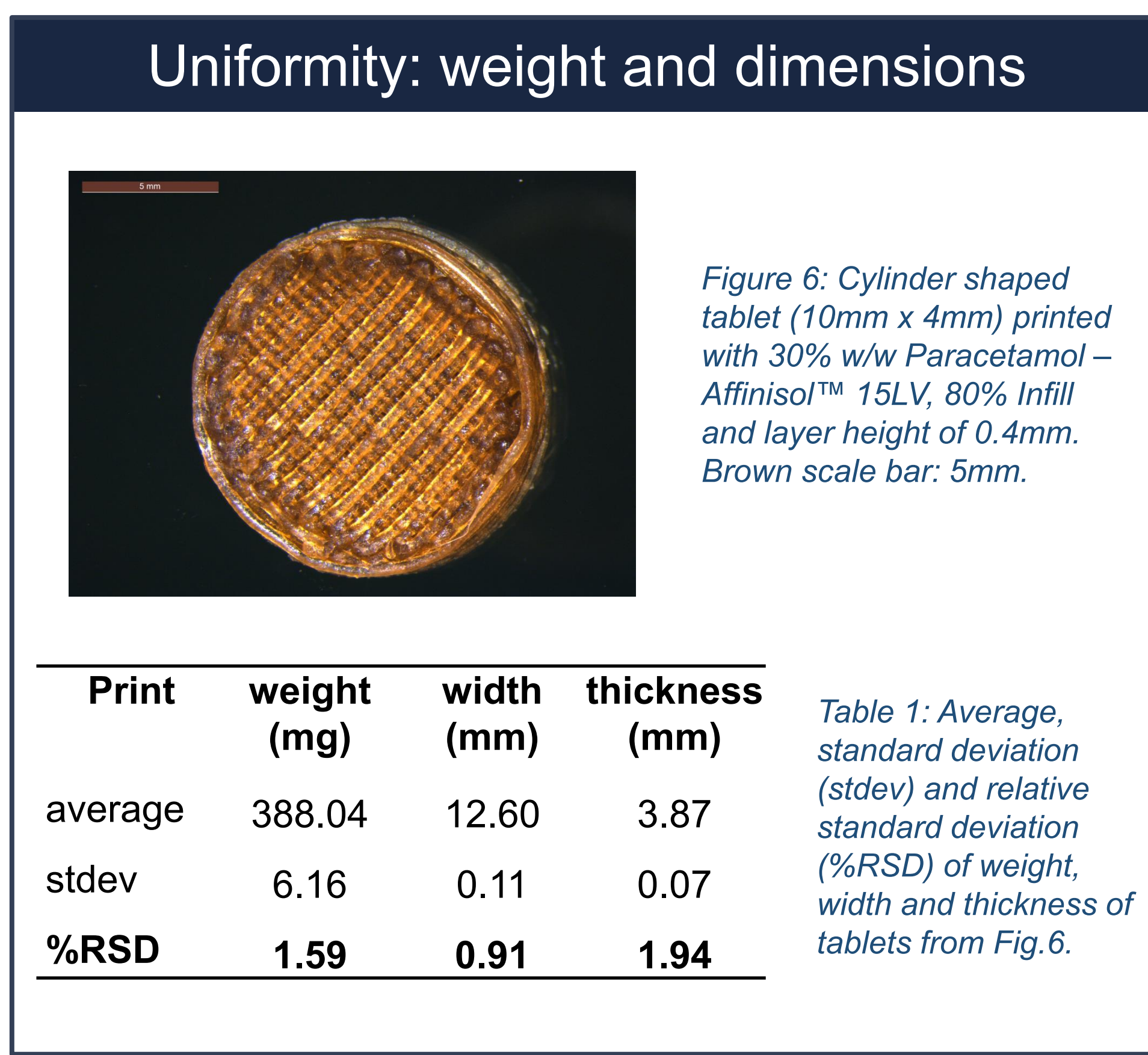
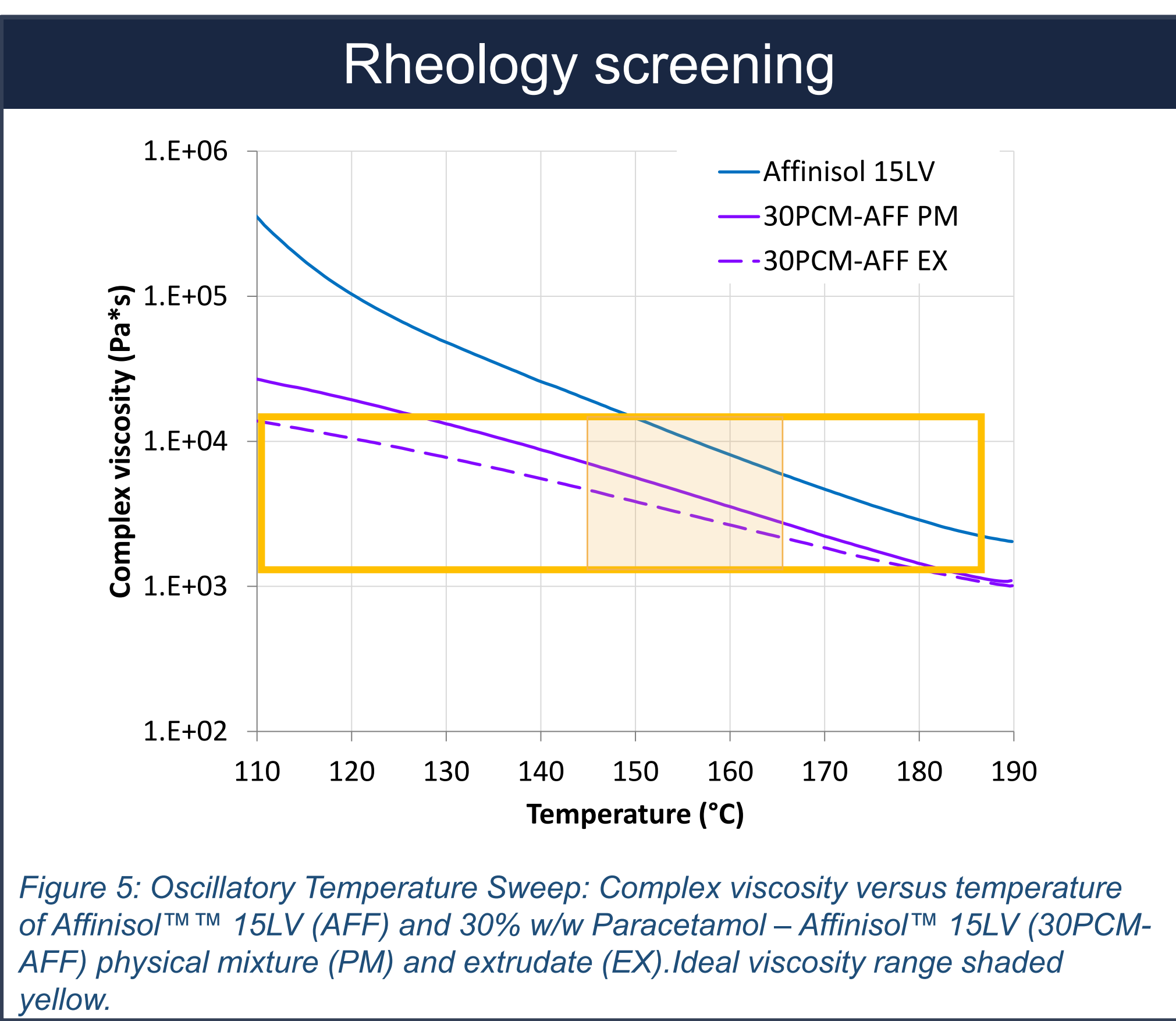
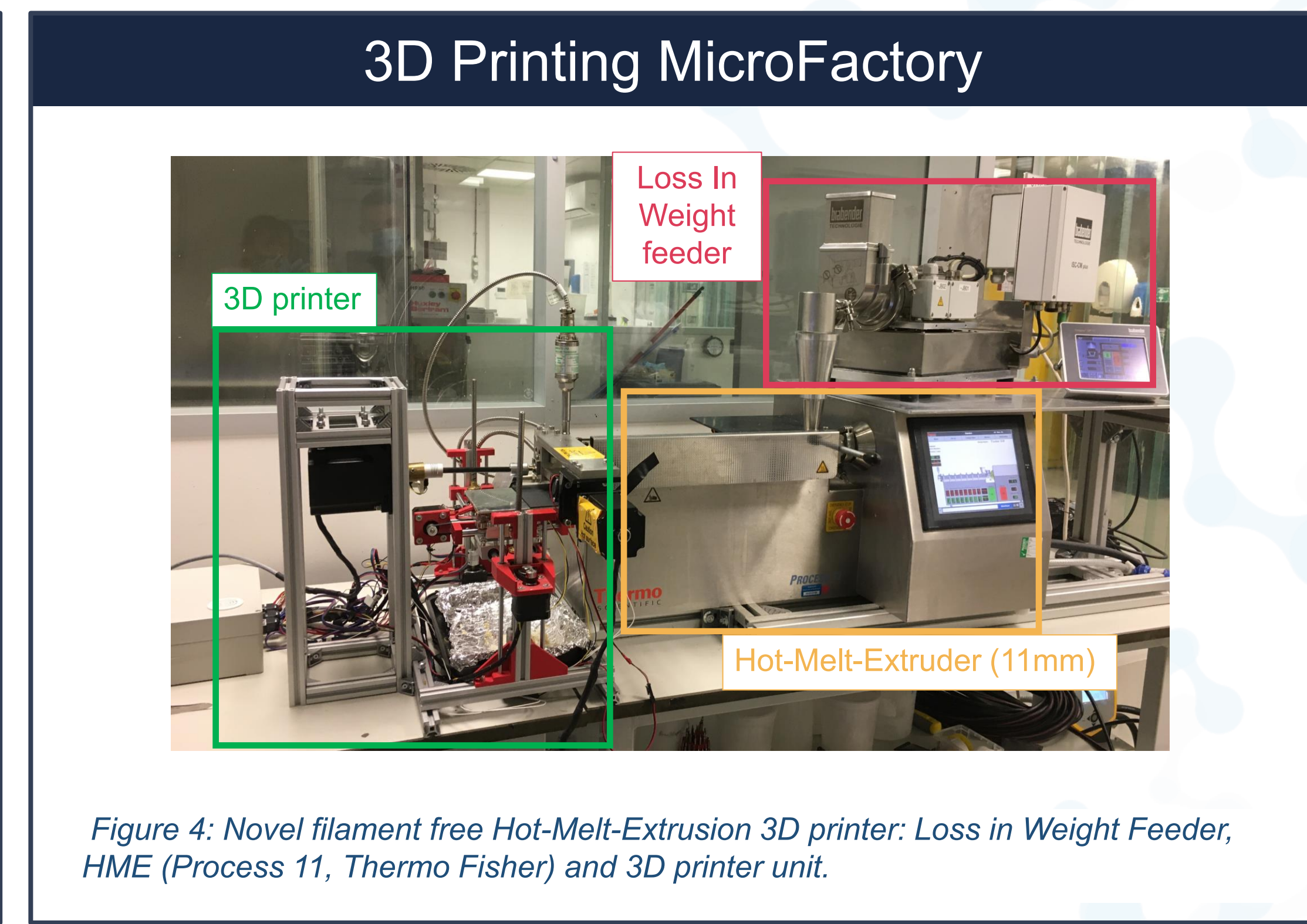
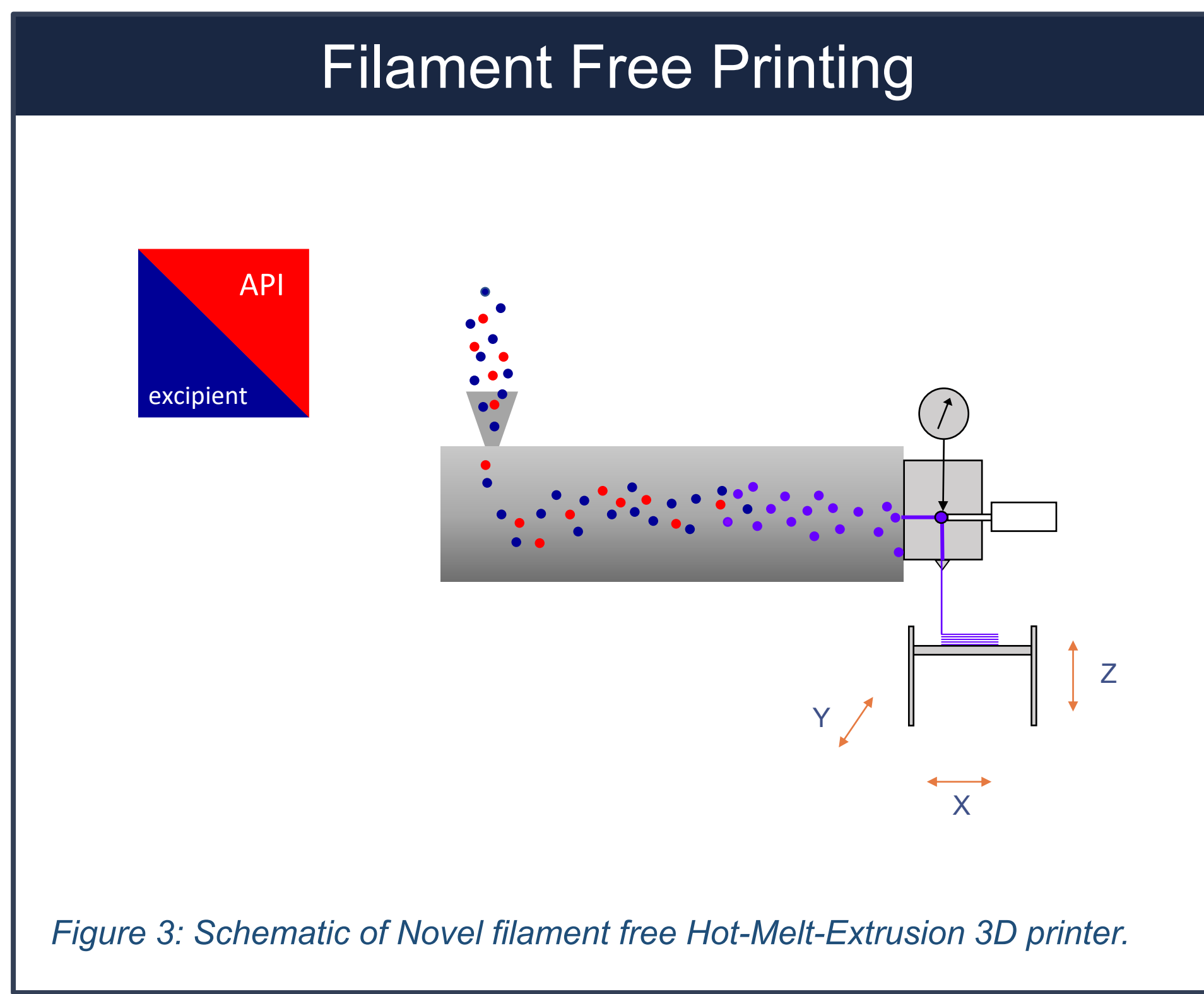
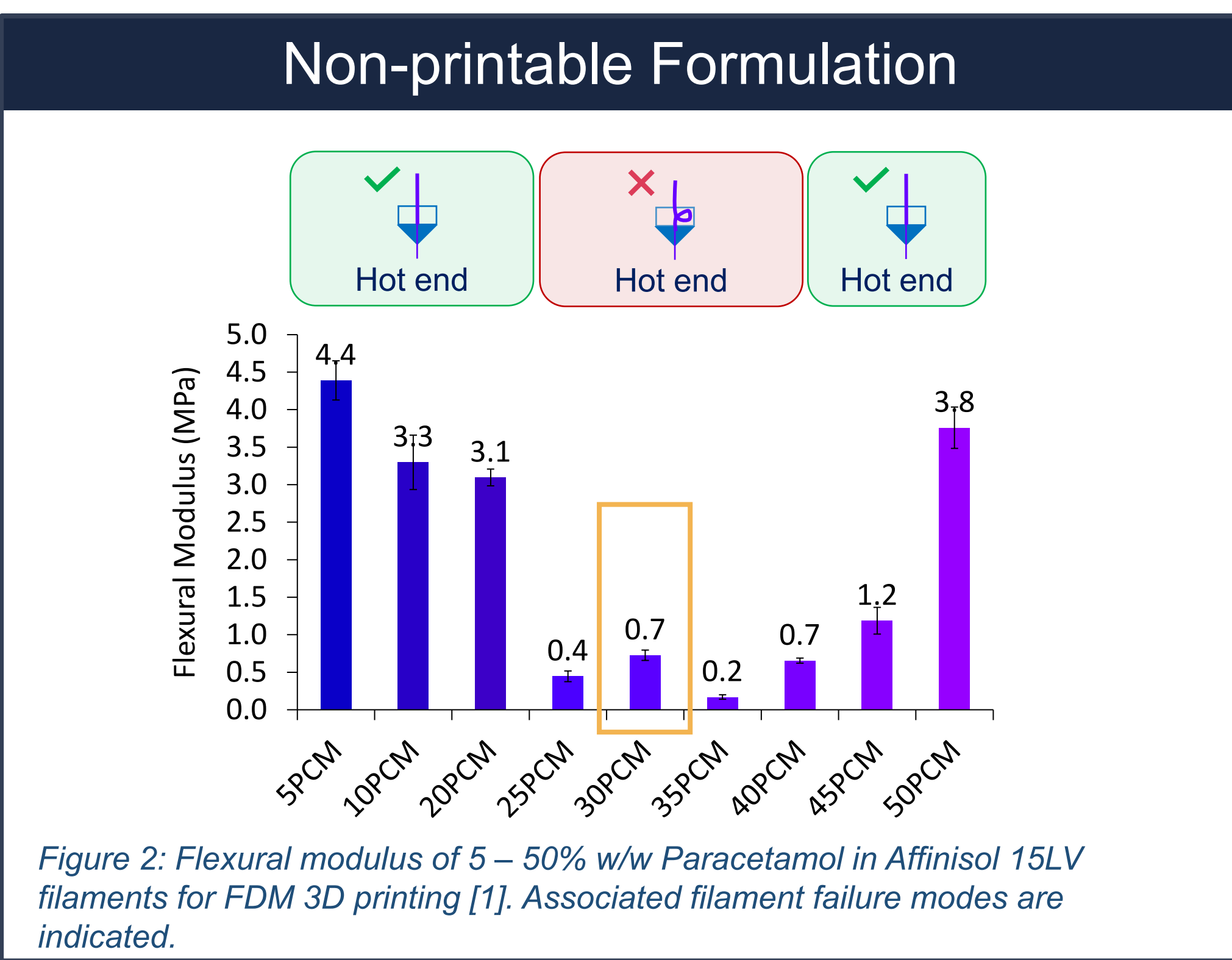
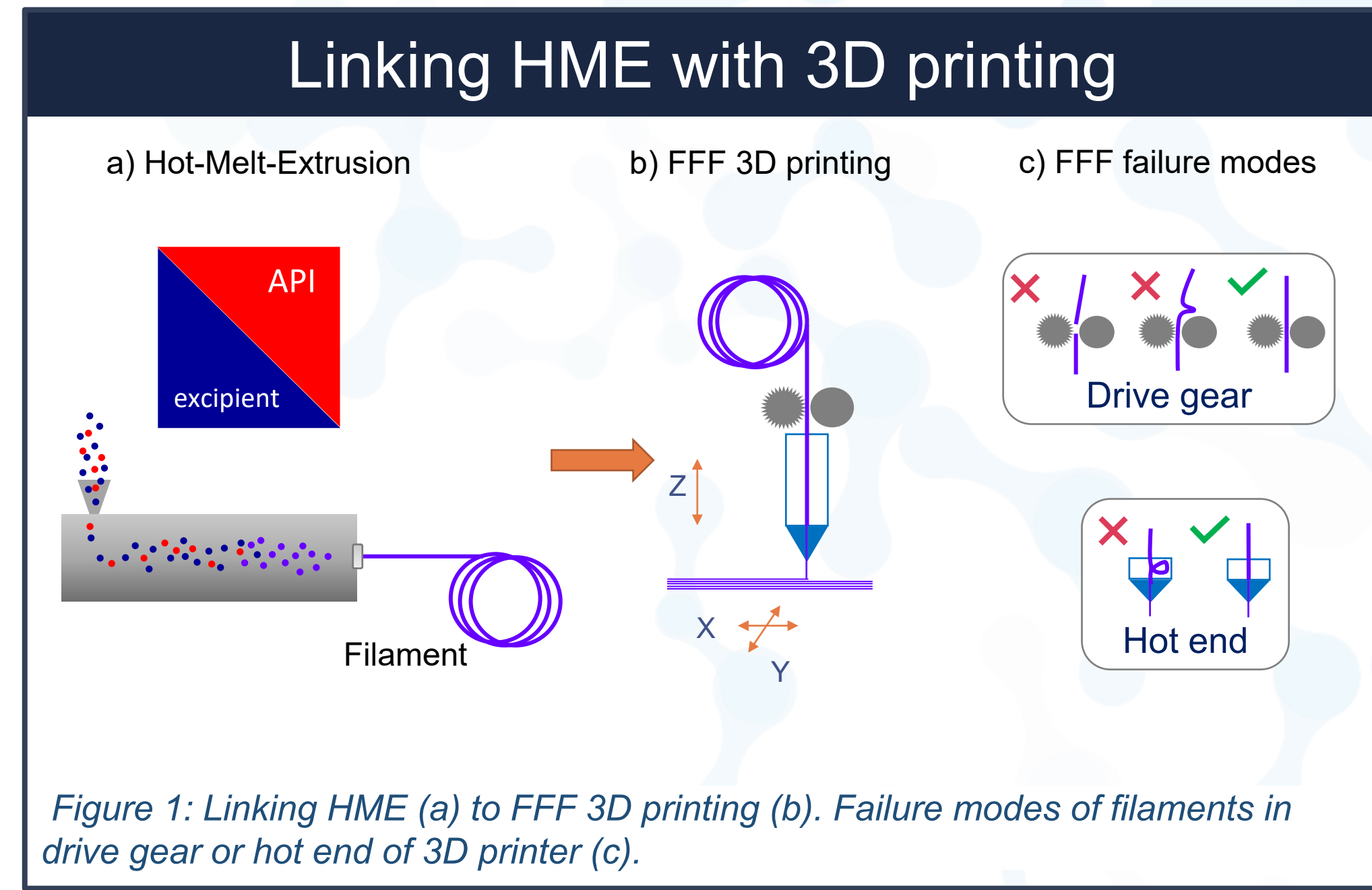


### Context and Aim of Work

The aim of the HUB MicroFactory is to develop a continuous end to end process with as little material as possible.

The aims of this work are

- to identify and overcome limitations of pharmaceutical formulations for 3D printing,
- to implement an **Additive Manufacturing MicroFactory**,
- to define the operating space of a novel, filament free 3D Printer.



### References

- Prasad E, Islam MT, Goodwin DJ, Megarry AJ, Halbert GW, Florence AJ, Robertson J 2019. Development of a hot-melt extrusion (HME) process to produce drug loaded Affinisol™ 15LV filaments for fused filament fabrication (FFF) 3D printing. Additive Manufacturing 29:100776.

### Conclusion

Limitations of pharmaceutical formulations for FFF have been identified and characterised. By implementing a novel integrated HME-3D printer, an intermediate feedstock filament in an FDM process is no longer required. This opens up the formulation space highly plasticised polymers in 3D printing of pharmaceutical dosage forms.

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