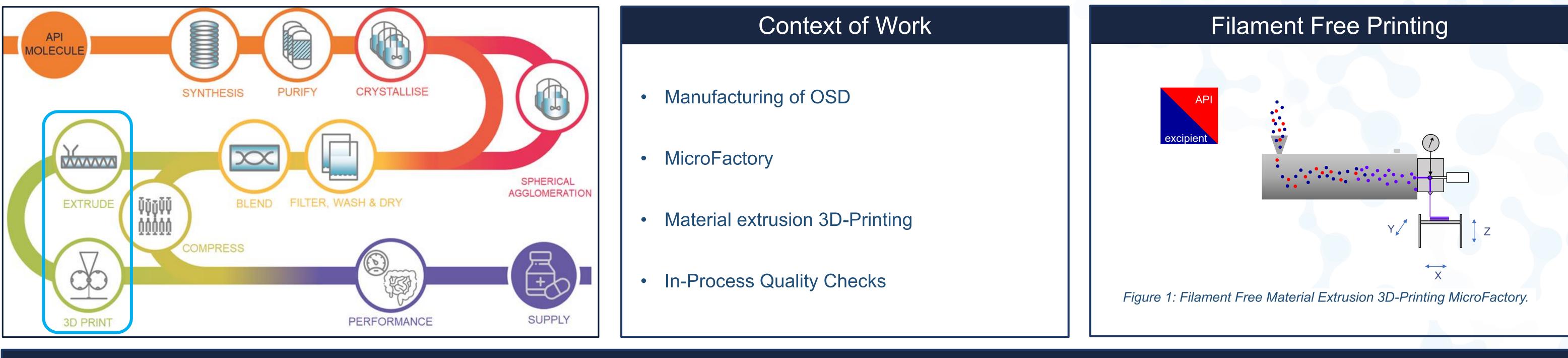


Linking 3DP Manufacturing with SIFT-MS Volatiles Organic Compound Analysis

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Linking 3DP Manufacturing with SIFT-MS

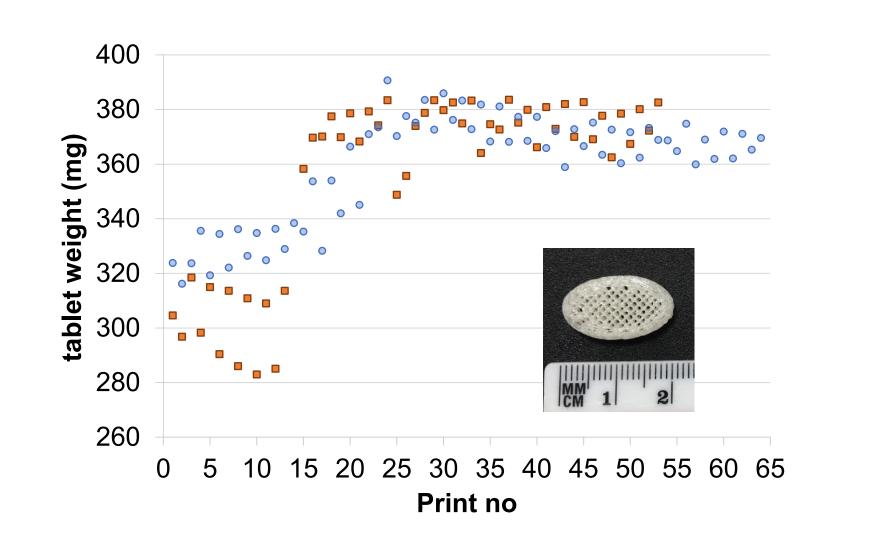
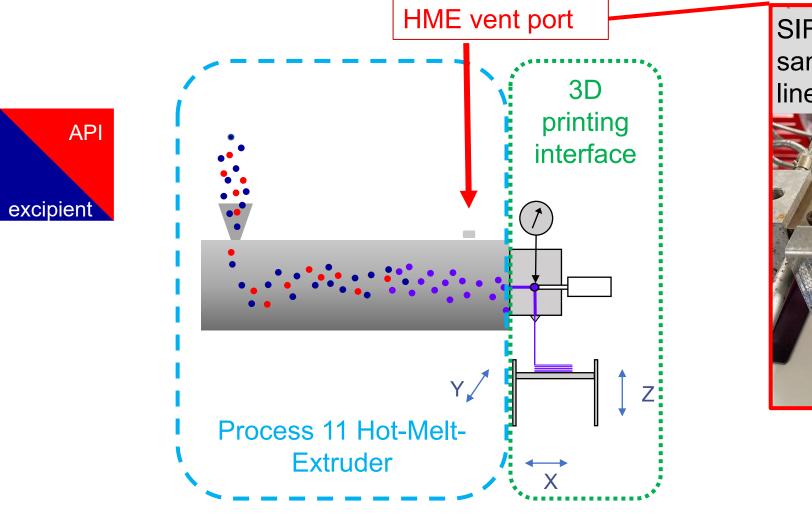


Figure 2: Tablet weight versus print number of 3DP tablets containing 50% w/w PCM-Plasdone[™] S-630.



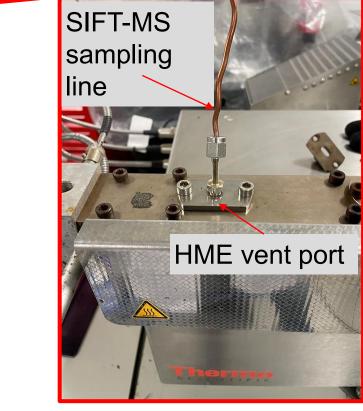
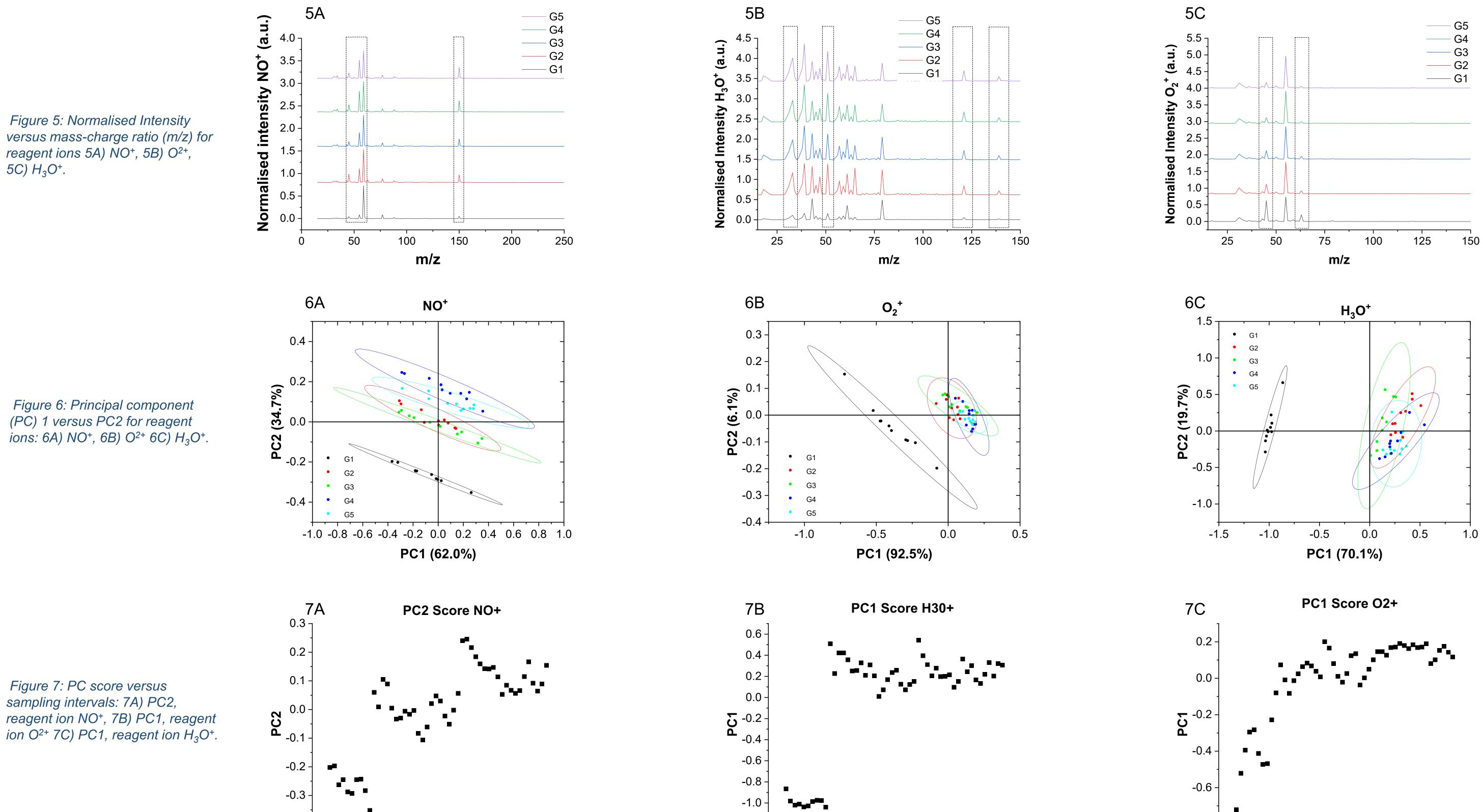




Figure 3: Schematic of novel filament free Hot-Melt-Extrusion 3D printer and SIFT-MS sampling setup.

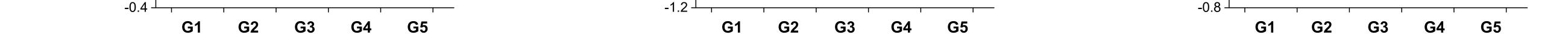
Figure 4: Voice200ultra, Syft-Technologies.

Results SIFT-MS



sampling intervals: 7A) PC2, reagent ion NO⁺, 7B) PC1, reagent ion O²⁺ 7C) PC1, reagent ion H_3O^+ .

5C) H₃O⁺.



References	Conclusion
 [1] E. Prasad, J. Robertson, G.W. Halbert, Printability of pharmaceutical polymers in FDM 3D printers, Virtual PharmSci : APS international conference, Virtual, 2021, [2] E. Prasad, J. Robertson, G.W. Halbert, Identifying the operating space and repeatability of a novel filament free FDM printer, AAPS 2022 Pharm Sci 360, Boston, MA, USA, 2022, [3] E. Prasad, J. Robertson, G.W. Halbert, Quality control test for pharmaceutical feedstock material for FDM 3D printers, Virtual PharmSci : APS international conference, Virtual, 2021, [4] A. Smith, E. Bordos, J. Robertson, A. Florence, The application of SIFT-MS for examining the degradation of polymers, CMAC Summer School, Dunblane, UK, 2023. 	SIFT-MS analysis of a 3DP manufacturing process related a change in volatile organic compounds profile to changes in weight of the final pharmaceutical product.

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