

# 3D PRINTING

## METHODS:

### Fused Deposition Modelling

This technology is used for implants, zero-order release tablets, and formulations that include polymers.

### Thermal Inkjet Printing TIJ

TIJ can avoid heat by relying on voltage, so it can be used to print heat-sensitive medications.

### Inkjet Printing

Powder is applied as a substrate, using variable layers and drug combinations. The ink is sprayed in various droplet sizes, drying to provide a solid dosage form.

### Direct-wise

A 3D microstructure is created through a pattern-generating device. A computer-controlled translational stage guides the process.

### Zip Dose

Personalised 3D printed medicines with a high drug-load are produced using porous material. The procedure relies on high dissolution and disintegration levels.

### Vat Photopolymerization

Light-induced polymerization uses light irradiation to cure liquid resins in layers for controlled release. Two-dimensional layers are cured into a hardened 3D structure