



PENDING

(IN202311039694)

Dry polymeric composites for hydrogel formulations and method of preparing the same

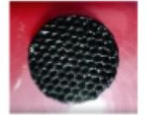
Oval Shape Scaffold photo



Round Shape Scaffold photo
Infill pattern- line
Dimension:20X20 mm
Number of layers- 6



Round Shape Scaffold photo
Infill pattern- honey comb
Dimension:12X12 mm
Number of layers- 6



NEED

The pharmaceutical industry faces challenges in developing efficient and cost-effective hydrogel formulations for drug delivery and 3D printing. Traditional methods often struggle with solubility and consistency, highlighting the need for better alternatives.

TECHNOLOGY OVERVIEW

This invention presents a dry polymeric composite formulation that forms hydrogels upon solubilization in water. The hydrogel is suitable for drug delivery and 3D printing applications. It incorporates various polymers and gelling agents, offering control over properties like solubility, drug release, and printing capabilities.

TECHNOLOGY KEY FEATURES

Dry polymeric composite formulation for hydrogel production with controlled solubility, drug loading, and 3D printing capability. Features polymers like polyvinyl alcohol and cellulose-based compounds, enabling versatile applications in drug delivery and printing.

[Read more here](#)

MARKET ANALYSIS

The global hydrogel market is expected to grow at a CAGR of 6.3%, reaching \$15.6 billion by 2033. Key drivers include the growing demand for advanced drug delivery systems and 3D printing.

Target Industries

Pharmaceuticals, 3D Printing, Bioprinting. , Pharmaceutical formulators, 3D printing material suppliers, enterprises focusing on customized drug delivery systems, and companies developing bioprinted tissues or organs.

AT A GLANCE

- SDG 3 (Good Health and Well-being), SDG 9 (Industry, Innovation, and Infrastructure)

Technology is available for licensing/ co-development.

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