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PREPARING UNIFORM MICROSPHERULE AND NANOSPHERULE MOLECULE- IMPRINTING POLYMERS AND CONTROLLING THEIR SIZE AND MORPHOLOGY AS DRUG-DELIVERY SYSTEM FOR GABAPENTIN

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Molecule-imprinting polymers (MIP's) are significant for their specific and unique behavior in absorbance and optional severance, explicit conditions of production and controllability. Recently these materials have been used vastly as modern drug-delivery systems (DDS). In this research, molecule-imprinting polymers are prepared for gabapentin as template, MAA as functional group, EGDMA & TRIM as cross-linkers and acetonitrile as the solvent.
By choosing precipitation polymerization method and changing the type and molecular rates of cross-linkers, we can arrange the size and the morphology of the particles from micro to nano and gather uniform particles, so then different attributes in loading, releasing and selectivity will be achieved. The data gathered from FT-IR, NSA, SEM, and TGA manners will be investigated between MIP and NIP particles.