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Recent Advances in In-situ Gel Formulations

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Abstract: *In-situ gels are now recognized as one of the popular and accessible approaches. These systems have several advantages, including simple manufacturing, convenience of use, improved retention, and patient compliance by decreasing drug delivery frequency due to their distinctive solution to gel transition features. In-situ temperature-sensitive gel is a type of in-situ gel that looks as a solution at room temperature but transforms spontaneously into a gel at body temperature. The'sol-gel' process involves hydrolysing, polymerizing, or condensing the precursor to produce a particle suspension or solution. Such in-situ gel formation methods, which can be delivered in liquid form, gel at the completion site. In recent years, some researchers developed in-situ gelling methods for liposomes, microspheres, nanoemulsion, nanospheres, and so on. This review concentrated on the introduction, benefits, downsides, types of polymers, and acceptable qualities for making in-situ gel.*

Keywords: sol to gel (solution to gel), Nanoemulsion, Hydrolysing, Polymerising

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