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Enhancement of the release of curcumin by freeze drying technique using inulin and neusilin as carriers

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Curcumin solubility at physiological pH (6.8) was significantly increased by preparing solid dispersion (SD) with inulin and neusilin US2 at different ratios using freeze-dry technique. Based on the results of differential scanning calorimetry and X-ray diffraction studies, curcumin was presented in its amorphous state in formulations containing neusilin US2. Formulation that contain curcumin, inulin and neusilin US2 at ratio (1:5:1) gave the best enhancement in curcumin dissolution, about 98% of curcumin was released compared with 21% from raw material. Moreover, physical stability tests showed that curcumin remained in its amorphous form after three months.

Biography

Mai Subhi Khanfar is an Associate Professor of Pharmaceutical Technology. She has completed her PhD from Jordan University of Science and Technology. She has published more than 22 papers in reputed journals and has interest in enhancing the solubility of poorly soluble drugs using various techniques like spray drying, liquisolid, solid state characterization, excipients and pre-formulation.

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