

## Investigation of pharmaceutical properties of cefuroxime axetil oral suspension

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**Background and Aims:** Cefuroxime is the second generation cephalosporin, which its intravenous and oral dosage forms are available. Oral route is the selective method for administration of most of the drugs. The aim of this study was formulating 'for oral' cefuroxime axetil suspensions.

**Methods:** Minitab (ver.15) was used to design the formulations containing 125 mg of cefuroxime in 5 ml vehicle. After selecting the acceptable preparations, physical stability tests and other tests such as dissolution rate, pH, zeta potential and viscosity measurement of formulations were performed.

**Results:** From all 33 formulations, only 9 were selected to further investigation. Considering no sedimentation, the sedimentation volume was determined to be 1. The degrees of flocculation were also equal to 1. All selected formulations released the drug between 81-100% in 30 minutes which was acceptable according to the USP32 criteria. The results of assay test also proved that all formulations contain the drug in acceptable range (91-106%). The viscosity curves showed that the systems were pseudo plastic and thixotrop.

**Conclusions:** Designed cefuroxime axetil formulations had good qualities and could be added as a new product to Iran drug marketing

**Keywords:** Cefuroxime axetil; Oral suspension; Viscosity; Zeta potential; Sedimentation volume; Degree of flocculation