



## Evaluation of analgesic effect of piroxicam liquisolid system in rat and comparison with conventional formulation

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**Background and Aims:** Piroxicam is a poorly Water-soluble anti-inflammatory and analgesic drug. There are several techniques that enhance solubility of poorly soluble substance. Liquisolid compacts is a promising technique that increases dissolution rate of poorly soluble drugs. The aim of this study was to assess the use of liquisolid technique in enhancing dissolution rate of Piroxicam for improvement of analgesic effect in-vivo study. **Methods:** Study was performed in six groups of six male rats. The pure powder, the powder of capsules currently available in Iran pharmacy market and prepared liquisolid formulation in 2,5,10 mg/kg doses were given orally one hour later, formulation 2.5% (v/v) was injected to the hind paw of the rats, and their tolerance to pain were recorded during of 0-5min (acute phase) and 15-60min (chronic phase). **Results:** In chronic phase analgesic effect of liquisolid formulation of Piroxicam more analgesic effects was observed more than that of powder and current capsule powder which is available in Iranian pharmacy market. However but in acute phase there was not any significant difference. **Conclusions:** The liquisolid formulation of Piroxicam induced greater analgesic effect during chronic phase of formaline test when compared with pure powder and capsule powder ( $p < 0.001$ ). We can conclude that liquisolid technique could be used for increasing analgesic effect of Piroxicam as a poorly water soluble drug.

**Keywords:** Piroxicam; Liquisolid formulation; Dissolution