

# European Pharma Congress

August 25-27, 2015 Valencia, Spain

## Development of sustained release tablet formulations from hydrophilic matrix of naproxen sodium with HPMC and chitosan

Alper Arslan, Filiz Atalay, Ozgur Eşim, Cansel Kose Ozkan, Ayhan Savaşer and Yalçın Özkan  
Gülhane Military Medical Academy, Turkey

In recent years, there are many innovative formulations about sustained released drug from hydrophilic matrix. The effect of different concentrations of HPMC (hydroxypropyl methylcellulose) and chitosan on release rate of naproxen sodium was evaluated. All polymers (HPMC, Chitosan, Avicel 101 and Mg stearate) were analyzed for particle size distribution using laser diffraction spectroscopy. The sustained release matrix tablets were prepared by direct compression method. Tablets were analyzed for selecting optimum hardness and thickness. Dissolution rate of formulations were performed using apparatus II (USP) in phosphate buffer of pH 6.8 in 900 ml of vessels with 50 rpm. The suitability for 8 hours of optimum sustained released formulation was determined by UV Spectroscopy at 317 nm and 331 nm wavelengths. In vitro test results of developed tablets were evaluated. Hardness, thickness, weight variations, and friability results were found suitable for tablets. The results of the study clearly demonstrated that HPMC and chitosan matrix tablet formulation is an effective and promising drug delivery system for once daily administration of naproxen sodium.

### Biography

Alper Arslan graduated from Faculty of Pharmacy in June 2010 from Marmara University and began his Postgraduate studies at Pharmaceutical Technology Department from Gülhane Military Medical Academy in Turkey.

### Notes: