

Identification, estimation & determination of residual solvents of Olanzapine in bulk & formulation by HPLC, GC & IR

Asha latha

Prist University, India

Olanzapine is a drug that is used to treat schizophrenia and acute manic episodes associated with bipolar I disorder. Olanzapine belongs to a drug class known as atypical antipsychotics. Multicentre trials in patients with schizophrenia confirm that olanzapine is a novel antipsychotic agent with broad efficacy, eliciting a response in both the positive and negative symptoms of schizophrenia. Compared with traditional antipsychotic agents, olanzapine causes a lower incidence of extrapyramidal symptoms and minimal perturbation of prolactin levels. Generally, olanzapine is well tolerated. The pharmacokinetics of olanzapine are linear and dose-proportional within the approved dosage range. Its mean half-life in healthy individuals was 33 hours, ranging from 21 to 54 hours. The mean apparent plasma clearance was 26 L/h, ranging from 12 to 47 L/h. Smokers and men have a higher clearance of olanzapine than women and nonsmokers. After administering olanzapine, approximately 60% of the radioactivity was excreted in urine and 30% in faeces. Olanzapine is predominantly bound to albumin (90%) and alpha 1-acid glycoprotein (77%). A rapid, specific isocratic HPLC method has been developed for the simultaneous determination of olanzapine using a photo diode array (PDA)/UV detector. The method was validated for precision, specificity, linearity, robustness and stability and stability in analytical solution for pure drugs. In this determination of the residual solvents of Olanzapine by gas chromatography and infra red spectroscopy has been carried out. The study brings forward new and interesting aspects on the decomposition behavior of Olanzapine.

Biography

Asha latha has completed her graduation in Sultan-ul-uloom college of Pharmacy completed in the year 2008 followed by completion of master's in Pharmacy specialization in Pharmaceutics in the year 2011. Also she has done her Project work at Dr. Reddy's Laboratories Ltd. Hyderabad.

ashalathampharm@gmail.com