

5. CONCLUSION

The current work adopted development of etodolac soft gelatin capsule formulation based on lipid based classification system and hydrophilic systems in addition to studying the effect of these formulations on the stability of softgels. From the previous work, it is concluded that:

- Application of hydrophilic surfactants (i.e. HLB > 12) and hydrophilic based system showed a remarkable enhancement in the dissolution rate of etodolac in phosphate buffer dissolution medium.
- To increase the physical stability of etodolac suspension; required HLB value of the dispersion medium should be lined with the total HLB value of the hydrophilic surfactants.
- Antioxidants as BHT or Vit E acetate should be added to formulations containing hydrophilic surfactants which composed of polyoxyethylene moiety to protect it from autoxidation process which leads to deterioration of softgel shell and a sharp decrease in the dissolution results of etodolac.
- Although F 7 and F 10 showed a good and stable dissolution results after accelerated and shelf stability, F 7 was selected to be the most appropriate formulation for etodolac softgel due to better mechanical results over F 10 which may lead to capsule brittleness after excessive drying.