6. CONCLUSION

In the study we had investigated for the potential of a microemulsion based in situ electrolyte-triggered gelling system for specific delivery of Moxifloxacin to posterior ocular tissue and fluids. Compared to two other formulations, those are in situ gelling system and eye drop solutions, the Moxifloxacin microemulsion based in situ gelling system showed better penetration into ocular tissues, higher Moxifloxacin levels in vitreous humor and prolonged residence in the cornea.

After 45 minutes of last dosing in three times a day for 3-days regimen, a sufficient Moxifloxacin concentration (>>MIC90 for most of the pathogens responsible for Endophthalmitis) was detected in the vitreous humor, which suggests potential of Moxifloxacin microemulsion in situ gelling system for delivery of drug to the posterior chamber of eye. In vivo ocular irritation test on animals revealed good compatibility of the system. Therefore, it is concluded that the Moxifloxacin microemulsion in situ gelling system might represent an alternative for treatment of Endophthalmitis.