Conclusion
CONCLUSION

The present study was undertaken to enhance the dissolution of sparingly soluble BCS class II drug RXB. The results of experimental study confirms that techniques with suitable carrier/s i.e coprecipitates with PEG-PVP in combination, melts using PXM, surface solid dispersion using Gelucire 44/14 and adsorbent granulated colloidal silicon dioxide and inclusion complex using β-cyclodextrin (Further aid by kneading and microwave drying) as well as process and formulation factors of each approach were highly influenced the dissolution rate of RXB. Statistical experimental design approach facilitated identification and optimization of critical process and formulation factors in the studies. Characterization studies revealed that the enhancing effect of solid dispersion>Inclusion complex is due to the transformation of drug to amorphous form or decrease in the crystallinity of drug and/ or entrapment of drug in cyclodextrin cavity. The powdered products were successfully formulated as tablets. The tablet containing waxy carriers i.e. PEG, PXM and Gelucire showed problems relating to hardness and disintegration. Thus, suitable excipients were incorporated for achieving required characteristics of the tablets. Inclusion complex exhibited improved tablet property and highest dissolution All the powder and tablet formulation were found stable. In the present study, stability studies of powder and tablet formulations were carried out at 25°C and 60%RH for 5 weeks. However, for evaluating the marketing potential of these formulations, stability study should be carried out for 6 months as per stability guidelines for getting approval of launching the product in market by regulatory authorities. The optimized tablet formulations exhibited improved drug release than marketed tablets. The dissolution of CAR; another BCS class-II drug was also enhanced using these optimized techniques. Thus, it is expected that these techniques could be useful for dissolution enhancement of drugs belonging to BCS class II. From the above study, it can be concluded that techniques optimized in present investigation have a greater prospective to improve the dissolution of sparingly water soluble drugs. Thus, by adopting a systematic formulation approach, one can achieve an optimum point in the shortest time with minimum efforts.