

## 电解质对两性药物分子盐酸氯丙嗪的胶团生长的影响

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### 摘要:

The effect of electrolytes on the micellar behavior of an amphiphilic drug, chlorpromazine (CPZ) hydrochloride, was studied using cloud point (CP) and dye solubilization techniques. In the presence of KBr, increase in pH led to decrease in the CP of 50 mmol·L<sup>-1</sup> drug solution (prepared in 10 mmol·L<sup>-1</sup> sodium phosphate (SP) buffer) because of deprotonation of drug molecules at high pH. The visible absorbance increased (due to dye solubilization) with the increase in pH from 6.5 to 6.9, which indicated micellar growth. At fixed pH(6.7), addition of inorganic salts (KF, KCl, and KBr) to drug solutions (50 mmol·L<sup>-1</sup>) caused an increase in the CP as well as in the visible absorbance, with effectiveness being in the order: F<sup>-</sup>>Na<sup>+</sup>>K<sup>+</sup>, which was explained by considering cognizance of their hydrated radii. Compared with anions, their effect was small. Increase in [CPZ] caused micellar growth and hence the CP as well as the visible absorbance increased. The overall behavior was discussed in terms of electrostatic interactions and micellar growth.

关键词: Phenothiazine drug Chlorpromazine hydrochloride Cloud point Dye solubilization Hofmeister series Micelles

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