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Investigation of the Release Behavior of Diethylhexyl Phthalate from the Polyvinyl-chloride Tubing for Intravenous Administration

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The release behavior of diethylhexyl phthalate (DEHP) from polyvinyl-chloride (PVC) tubing was investigated with the coexistence of polysorbate 80 (Tween 80) in various solutions. The release of DEHP from the PVC tubing is closely correlated with the interaction of Tween 80 and DEHP such as the formation of micelles, the collision of micelles against the surface of the PVC tubing and the diffusion properties of DEHP and/or Tween 80 in the liquid medium.