

分离工程

## 非离子表面活性剂C<sub>12</sub>E<sub>10</sub>的浊点分相行为及其应用

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摘要

关键词 [浊点萃取](#) [分相行为](#) [萃取剂](#) [二\(2-乙基己基\)磷酸](#)

分类号

## Phase-separation behavior for cloud point and application of non-ionic surfactant C<sub>12</sub>E<sub>10</sub>

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### Abstract

Cloud point extraction (CPE) utilizing polyoxyethylene 10 lauryl ether (C12E10) as the surfactant was carried out to separate and concentrate di(2-ethyl hexyl) phosphoric acid (D2EHPA) in its dilute aqueous solution. The CPE process was facilitated by decreasing the cloud point (CP) temperature of the solution with sodium sulfate. The influence of C12E10 concentration, settling temperature, pH value, and Ni<sup>2+</sup> in the solution on the extraction efficiency (E) was studied. The results showed that extraction efficiency increased with the concentration of C12E10, temperature and pH value of the system. Trace Ni<sup>2+</sup> in the solution has no obvious influence on extraction efficiency of D2EHPA when pH=7.00. Single-stage extraction efficiency larger than 85% has been obtained.

**Key words** [cloud point extraction](#) [phase-separation behavior](#) [extractant](#) [D2EHPA](#)

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