

**ABSTRACT**

The present invention provides a process for purifying phenols by separating the aliphatic carbonyl compounds  
5 and/or the aromatic carbonyl compounds from an acid decomposition product of alkylaryl hydroperoxide or crude phenol obtained from an acid decomposition product of cumene hydroperoxide without causing the loss of phenol and  $\alpha$ -methylstyrene which are the useful components.

10 The process for purifying phenols according to the invention comprises bringing an acid decomposition product of alkylaryl hydroperoxide into contact with a Group VB or Group VIIB metal oxide, to convert the aliphatic carbonyl compounds and/or the aromatic carbonyl compounds in the acid  
15 decomposition product of alkylaryl hydroperoxide to high-boiling compounds, and then separating these compounds and phenols by distillation.

Further, the process for purifying phenols according to the invention comprises bringing crude phenol obtained from  
20 an acid decomposition product of cumene hydroperoxide into contact with a Group VB or Group VIIB metal oxide, to convert the aliphatic carbonyl compounds in crude phenol to high-boiling compounds, and then separating these compounds and phenol by distillation.