

ABSTRACT OF THE DISCLOSURE

PROCESS FOR PRODUCING CYCLOHEXANONE OXIME

The present invention provides a process for producing cyclohexanone oxime which includes the following steps (1) to (6); (1) reaction step: a step of reacting
5 cyclohexanone, hydrogen peroxide and ammonia in the presence of a titanasilicate catalyst to give a reaction solution containing cyclohexanone oxime, water, unreacted ammonia and unreacted cyclohexanone, (2) first
10 distillation step: a step of subjecting the reaction solution obtained in the step (1) to distillation to distil off ammonia and obtain a bottom product containing cyclohexanone oxime, water and cyclohexanone, (3)
15 extraction step: a step of mixing the bottom product obtained in the step (2) with an organic solvent followed by separating a mixture into an organic layer and an aqueous layer, (4) washing step: a step of mixing the
20 organic layer obtained in the step (3) with water followed by separating a mixture into an organic layer and an aqueous layer, (5) second distillation step: a step of
25 subjecting the organic layer obtained in the step (4) to distillation to distill off the organic solvent and water and to obtain a bottom product containing cyclohexanone oxime and cyclohexanone, and (6) third distillation step: a step of subjecting the bottom product obtained in the
step (5) to distillation to distil off cyclohexanone and to

obtain a bottom product containing cyclohexanone oxime; wherein a compound selected from an oxide, an oxo acid, an oxo acid salt, an oxo acid ester and an oxo acid amide of boron or phosphorous is added to at least one of the water
5 used in the step (4) and the organic layer obtained in the step (4) to be subjected to the step (5).