

[ABSTRACT]

A method of producing high quality ϵ -caprolactam including:

a purification step in which a crude ϵ -caprolactam obtained by Beckmann

5 rearrangement of cyclohexanone oxime is mixed with an organic solvent to obtain a mixed solution, ϵ -caprolactam is crystallized from the mixed solution, and a high quality ϵ -caprolactam and a dropwise-crystallization-recovered-mother liquid are obtained by a solid-liquid separation; and

a recovering step in which an evaporation-crystallization-mother liquid
10 containing the dropwise-crystallization-recovered-mother liquid is subjected to evaporation to crystallize ϵ -caprolactam, followed by a solid-liquid separation to obtain a recovered ϵ -caprolactam and an evaporation-crystallization-recovered-mother liquid;

wherein the method includes

preparing a mixed liquid formed by mixing the dropwise-crystallization-
15 recovered-mother liquid with at least part of the evaporation-crystallization-recovered-mother liquid, at least part of the evaporation-crystallization-mother liquid which is extracted from a tank for conducting evaporation-crystallization, or both of at least part of the evaporation-crystallization-recovered-mother liquid and at least part of the evaporation-crystallization-mother liquid, prior to the recovering step; and
20 introducing the mixed liquid to the tank and mixing the evaporation-crystallization-mother liquid retained in the tank.