

Methods for the production of ϵ -caprolactone and 1,6-hexanediol

Abstract

The invention relates to processes for preparing 1,6-hexanediol and very pure ϵ -caprolactone from a dicarboxylic acid solution (DCS), comprising the steps of (a) esterification of the DCS with alcohols, (b) partial catalytic hydrogenation of the esters, (c) distillative removal of 1,6-hexanediol and low boilers as the top product, and (d) cyclization of the 6-hydroxycaproic ester present in the bottoms fraction in the presence of a higher-boiling alcohol than caprolactone.

Figure 1