

PROCESS FOR THE PREPARATION OF HIGH-PURITY BISPHENOL A

ABSTRACT OF THE DISCLOSURE

A process for the preparation of high purity bisphenol A is disclosed. The multi-step process entails a) reacting phenol with acetone in the presence of an acidic ion exchanger and a sulfur-containing co-catalyst to give a product mixture that includes bisphenol A and phenol; b) continuously obtaining from the product mixture crystals of bisphenol A-phenol adduct by suspension crystallization, c) separating the adduct obtained in step (b) by solid-liquid separation to obtain a solid phase and a liquid phase d) washing of the solid phase with a solution containing phenol to obtain washed solid phase and a second liquid phase, e) distilling the liquid phase and said second liquid phase to obtain dewatered solution containing 5 to 15 wt.-% p,p-BPA, 3 to 12 wt.-% isomers of BPA and less than 0.3 wt.-% water, f) introducing of at least 90 wt.-% by weight of the dewatered solution into step (a), g) adding phenol to the washed solid phase obtained in step d) to obtain a homogeneous material system that contains p,p' - BPA, isomers of BPA and water h) continuously obtaining from the homogeneous material system crystals of bisphenol A-phenol adduct by suspension crystallization; i) separating the crystals obtained in step (h) by solid-liquid separation to obtain a second solid phase, j) washing the second solid phase with a solution that contains phenol to obtain a washed adduct; and k) heating the washed adduct to remove phenol.

Figure 1