C L A I M S

1. Process for the preparation of a dialkyl carbonate and an alkanediol comprising:

(a) reacting an alkylene carbonate and an alkanol in the presence of a homogeneous transesterification catalyst to obtain a mixture containing unconverted alkylene carbonate, unconverted alkanol, dialkyl carbonate, alkanediol and catalyst, wherein the catalyst amount is of from 20 to 2,000 ppmw based on the amount of the mixture;

(b) contacting the mixture from step (a) with a solid sorbent to obtain a mixture containing unconverted alkylene carbonate, unconverted alkanol, dialkyl carbonate and alkanediol and further containing either no catalyst or a substantially reduced amount of catalyst;

(c) separating the mixture from step (b) into a bottom stream containing unconverted alkylene carbonate and alkanediol and a top stream containing unconverted alkanol and dialkyl carbonate;

(d) recovering the alkanediol from the bottom stream from step (c); and

(e) recovering the dialkyl carbonate from the top stream from step (c).

2. Process according to claim 1, wherein the homogeneous transesterification catalyst is an alkali metal hydroxide or alkanolate.

3. Process according to any one of the preceding claims, wherein the solid sorbent is a clay or ion exchange resin which contains acid groups.

4. Process according to claim 3, wherein the acid groups are carboxylic acid groups.

Claims

1. Process for the preparation of a dialkyl carbonate and an alkanediol comprising:
(a) reacting an alkylene carbonate and an alkanol in the presence of a homogeneous transesterification catalyst to obtain a mixture containing unconverted alkylene carbonate, unconverted alkanol, dialkyl carbonate, alkanediol and catalyst, wherein the catalyst amount is of from 20 to 2,000 ppmw based on the amount of the mixture;
(b) contacting the mixture from step (a) with a solid sorbent, which is a clay or ion exchange resin which contains acid groups, to obtain a mixture containing unconverted alkylene carbonate, unconverted alkanol, dialkyl carbonate and alkanediol and further containing either no catalyst or a substantially reduced amount of catalyst;
(c) separating the mixture from step (b) into a bottom stream containing unconverted alkylene carbonate and alkanediol and a top stream containing unconverted alkanol and dialkyl carbonate;
(d) recovering the alkanediol from the bottom stream from step (c); and
(e) recovering the dialkyl carbonate from the top stream from step (c).
2. Process according to claim 1, wherein the acid groups are sulfonic acid groups or carboxylic acid groups.
3. Process according to claim 2, wherein the acid groups are carboxylic acid groups.
4. Process according to claim 1 or 2 or 3, wherein the homogeneous transesterification catalyst is an alkali metal hydroxide or alkanolate.

5. Process according to claim 1 or 2 or 3, wherein the mixture from step (b) contains less than 50 ppmw of catalyst based on the amount of the mixture.