Claims:

1. Method for the preparation of 2,5-furan dicarboxylic acid comprising the step of contacting a feed comprising a compound selected from the group consisting of 5-hydroxymethylfurfural ("HMF"), an ester of 5-hydroxymethylfurfural, 5-methylfurfural, 5-(chloromethyl)furfural, 5-methylfuroic acid, 5-(chloromethyl)furoic acid, 2,5-dimethylfuran and a mixture of two or more of these compounds with an oxidant in the presence of an oxidation catalyst comprising at least one metal selected from Co and Mn, at a temperature between 140 and 200 °C at an oxygen partial pressure of 1 to 10 bar in the presence of a solvent comprising acetic acid or acetic acid and water mixtures.

2. Method according to claim 1, wherein the feed comprises a compound selected from the group consisting of 5-hydroxymethylfurfural ("HMF"), esters of HMF and a mixture thereof.

3. Method according to claim 1 or 2, wherein the oxidation catalyst comprises a source of bromine.

4. Method according to claim 3, wherein the oxidation catalyst contains both Co and Mn.

5. Method according to claim 4, wherein the oxidation catalyst comprises at least one additional metal.

6. Method according to claim 5, wherein the additional metal is Zr and/or Ce.

7. Method according to claims 1-6, wherein the oxidant is selected from oxygen, air or other oxygen-containing gases.

8. Method according to any of the previous claims wherein the temperature is between 160 and 190 °C.

9. Method according to any of the previous claims, wherein the feed comprises an ester of HMF containing an ester moiety of an alkyl carboxylic acid wherein the alkyl group contains up to 6 carbon atoms, preferably from 1 to 5 carbon atoms.

10. Process for the preparation of a dialkyl ester of 2,5,-furan dicarboxylic acid, comprising the step of contacting a feed comprising a compound selected from the group consisting of 5-hydroxymethylfurfural ("HMF"), an ester of 5-hydroxymethyl-furfural, 5-methylfurfural, 5-(chloromethyl)furfural, 5-methylfuroic acid, 5-(chloromethyl)furoic acid, 2,5-dimethylfuran and a mixture of two or more of these compounds with an oxidant in the presence of an oxidation catalyst comprising at least one metal selected from Co and Mn, at a temperature between 140 and 200 °C in the presence of a solvent comprising acetic acid or acetic acid and water mixtures, and esterifying the thus obtained product.

11. Process according to claim 10, wherein the product is esterified with a C_1-C_5 alkyl alcohol.

12. Process according to claim 11, wherein the C_1-C_5 alkyl alcohol is methanol and the dialkyl ester is the dimethylester of 2,5 furan dicarboxylic acid.

Claims

1. Method for the preparation of 2,5-furan dicarboxylic acid comprising the step of contacting a feed comprising a compound selected from the group consisting of 5-hydroxymethylfurfural ("HMF"), an ester of 5-hydroxymethylfurfural, 5-methylfurfural, 5-(chloromethyl)furfural, 5-methylfuroic acid, 5-(chloromethyl)furoic acid, 2,5-dimethylfuran and a mixture of two or more of these compounds with an oxygen-containing gas in the presence of an oxidation catalyst based on cobalt and manganese and containing a source of bromine, at a temperature between 140 °C and 200 °C at an oxygen partial pressure of 1 to 10 bar, in the presence of a solvent comprising acetic acid or acetic acid and water mixtures.

2. Method according to claim 1, wherein the feed comprises a compound selected from the group consisting of 5-hydroxymethylfurfural ("HMF"), esters of HMF and a mixture thereof.

3. Method according to claim 1 or 2, wherein the oxidation catalyst comprises at least one additional metal.

4. Method according to claim 3, wherein the additional metal is Zr and/or Ce.

5. Method according to any one of claims 1-4, wherein the temperature is between 160 and 190 °C.

6. Method according to any of the previous claims, wherein the feed comprises an ester of HMF containing an ester moiety of an alkyl carboxylic acid wherein the alkyl group contains up to 6 carbon atoms.

7. Method according to claim 6, wherein the feed comprises an ester of HMF containing an ester moiety of an alkyl carboxylic acid wherein the alkyl group contains from 1 to 5 carbon atoms.

8. Process for the preparation of a dialkyl ester of 2,5-furan dicarboxylic acid, comprising the step of contacting a feed comprising a compound selected from the group

consisting of 5-hydroxymethylfurfural ("HMF"), an ester of 5-hydroxymethyl-furfural, 5-methylfurfural, 5-(chloromethyl)furfural, 5-methylfuroic acid, 5-(chloromethyl)furoic acid, 2,5-dimethylfuran and a mixture of two or more of these compounds with an oxygen-containing gas in the presence of an oxidation catalyst based on cobalt and manganese and containing a source of bromine, at a temperature between 140 °C and 200 °C at an oxygen partial pressure of 1 to 10 bar, in the presence of a solvent comprising acetic acid or acetic acid and water mixtures, and esterifying the thus obtained product.

9. Process according to claim 8, wherein the product is esterified with a C_1-C_5 alkyl alcohol.

10. Process according to claim 9, wherein the C_1-C_5 alkyl alcohol is methanol and the dialkyl ester is the dimethylester of 2,5-furan dicarboxylic acid.