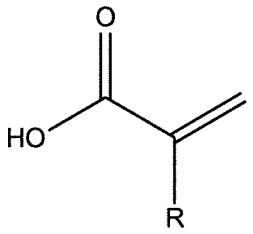
CLAIMS

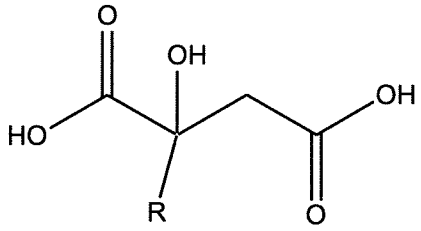
1. A method of producing a compound of formula (i):



formula (i)

wherein R = H or CH_3

the method comprising exposing a source of a compound of formula (ii) to reaction conditions of temperature and pressure:



formula (ii)

wherein R is defined as above

wherein, when R = CH_3, the source of a compound of formula (ii) is exposed to reaction conditions of temperature and pressure while being in a liquid phase, optionally, an aqueous phase.

2. A method as claimed in claim 1, wherein the reaction conditions comprise a temperature of at least 100°C and less than ~~about~~ 425°C .

3. A method as claimed in either of claim 1 or claim 2, wherein the reaction conditions comprise a pressure of between ~~about~~ 200 and 10,000psi.

4. A method as claimed in any preceding claim, wherein the reaction conditions comprise a temperature and pressure at which the reaction medium is in the liquid phase.

5. A method as claimed in any preceding claim, wherein the source of a compound of formula (ii) is exposed to reaction conditions of temperature and pressure in the presence of a catalyst.

6. A method as claimed in claim 5, wherein the catalyst is a base catalyst, an acid catalyst or an acid and base catalyst.

7. A method as claimed in any preceding claim, wherein the source of a compound of formula (ii) is exposed to the reaction conditions for a time period of between ~~about~~ 0.1 seconds and 300 seconds.

8. A method as claimed in any preceding claim, wherein the reaction conditions are generally acidic.

9. A method of converting malic acid to acrylic acid, the method comprising exposing a source of malic acid to reaction conditions of pressure and temperature.

10. A method of converting citramalic acid to methacrylic acid, the method comprising exposing a source of citramalic acid in the liquid phase to reaction conditions of pressure and temperature.

~~11. A compound of formula (i) produced by the method of any of claims 1 to 10.~~

11<u>2</u>. A method of producing an alkyl ester of a compound of figure (i),

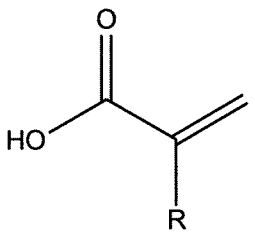


Figure (i)

the method comprising esterification of the compound of formula (i) formed by the method of any of claims 1 to 10.

123. A method of producing polymethylmethacrylate (PMMA), the method comprising esterification of methacrylic acid formed by the method any of claims 1 to 10 to form methyl methacrylate, followed by polymerisation of the said methyl methacrylate.

~~14. Polymethylmethacrylate (PMMA) formed from the method of claim 13.~~

135. A method of preparing polymers or copolymers of methacrylic acid, acrylic acid, methacrylic acid esters and/or acrylic acid esters comprising the steps of

(i) preparation of a compound of formula (i) in accordance with claim 1;

(ii) optional esterification of the compound prepared in step (i) to produce the corresponding ester;

(iii) polymerisation of the compound prepared in step (i) and/or the ester prepared in step (ii), optionally with one or more comonomers, to produce polymers or copolymers thereof.