~~Each feature disclosed in this specification (including any accompanying claims, abstract and drawings) may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.~~

The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

13. A method or process according to any of claim 11 or 12, wherein the mixture of solvents for the extraction of MAA is a C_4-C_{20} hydrocarbon solvent and MMA.

14. A method of preparing polymers or copolymers of (meth)acrylic acid or (meth)acrylic acid esters, comprising the steps of

(i) preparation of (meth)acrylic acid in accordance with any of claims 9-13;
(ii) optional esterification of the (meth)acrylic acid prepared in (i) to produce the (meth)acrylic acid ester;
(iii) polymerisation of the (meth)acrylic acid prepared in (i) and/or the ester prepared in (ii), optionally with one or more comonomers, to produce polymers or copolymers thereof.

~~15. Polyacrylic acid, polymethacrylic acid, polyalkylacrylate, polymethylmethacrylate (PMMA) and polybutylmethacrylate homopolymers or copolymers formed from the method of claim 14.~~

~~16~~15. A process for the production of methacrylic acid comprising:-
providing a source of a pre-cursor acid selected from aconitic, citric and/or isocitric acid;
performing a decarboxylation and, if necessary, a dehydration step on the source of pre-cursor acid by exposing the source thereof in the presence or absence of a base catalyst to a sufficiently high temperature to provide a dicarboxylic acid selected from itaconic, mesaconic, citraconic and/or citramalic acid; and

using the dicarboxylic acid produced in a process according to any of claims 1-13.

~~17~~16. A method of extracting (meth)acrylic acid from an aqueous reaction medium into an organic phase in contact therewith, the aqueous reaction medium being formed from at least one base catalyst and at least one dicarboxylic acid selected from fumaric, maleic, malic, itaconic, citraconic, mesaconic or citramalic acid or mixtures thereof in aqueous solution and containing the base catalysed decarboxylation products thereof including (meth)acrylic acid or (meth)acrylate base salt and the organic phase comprises a suitable organic solvent for the said (meth)acrylic acid characterised in that in the aqueous reaction medium the relative level of base catalyst to the said at least one dicarboxylic acid and/or pre-cursor thereof is maintained at a sub-stoichiometric level in relation to the formation of the first acid salt thereof during at least part of the extraction.

~~18~~17. A method of extracting (meth)acrylic acid from an aqueous reaction medium, the aqueous reaction medium being formed from at least one base catalyst and at least one dicarboxylic acid selected from maleic, fumaric, malic, itaconic, citraconic, mesaconic or citramalic acid or mixtures thereof in aqueous solution and containing the base catalysed decarboxylation products thereof including (meth)acrylic acid and/or (meth)acrylate base salt, the method comprising the step of solvent extraction of the (meth)acrylic acid into an organic phase comprising an organic solvent in contact with the said aqueous reaction medium wherein the method is characterised in that there is added an additional amount of at least one of the said

dicarboxylic acids and/or a pre-cursor thereof to the said aqueous reaction medium containing the said base catalysed decarboxylation products thereof to enhance the solvent extraction of the (meth)acrylic acid into the organic phase.

~~19~~18. A method or process according to any of claims 1-13 including the step of separating the organic phase from the aqueous phase after extraction followed by subsequent treatment of the organic phase to isolate the (meth)acrylic acid extracted in the extraction process from the organic solvent.

~~20~~19. A method or process according to any of claims 1-13 or ~~17~~16-~~19~~18 wherein the organic solvent is introduced to the aqueous medium before or after decarboxylation.

~~21~~20. A method or process according to any of claims 1-13 or ~~17~~16-~~20~~19 wherein the sub-stoichiometric level of base is maintained, after, if necessary, being implemented post reaction, during at least that part of the extraction process which is carried out after the decarboxylation step.

~~22~~21. A method or process according to any of claims 1-13 or ~~17~~16-~~21~~20, wherein the sub-stoichiometric level of base is maintained throughout the reaction and extraction.