CLAIMS:

1. A process for chromatographically separating propionic acid from an acrylic acid composition containing ~~excess~~ propionic acid, comprising contacting the acrylic acid composition with an amphoteric ion exchange resin and eluting propionic acid into a raffinate such that a reduced propionic acid acrylic acid product is recovered in an extract.

2. A process according to claim 1, wherein sufficient propionic acid is eluted in the raffinate such that the reduced propionic acid acrylic acid product contains less than 3000 parts per million by weight of propionic acid.

3. A process according to claim 2, wherein sufficient propionic acid is removed in the raffinate to provide a reduced propionic acid acrylic acid product containing less than 1000 parts per million by weight of propionic acid.

4. A process according to any of claims 1-3, which is conducted in a series of columns and with an eluent caused to pass through the columns as a simulated moving bed.

5. A process according to claim 4, wherein the acrylic acid composition contains at least about 3000 parts per million by weight of propionic acid.

6. A process according to claim 5, wherein the acrylic acid composition contains at least about 5000 parts per million by weight of propionic acid.

7. A process according to claim 1, wherein the amphoteric ion exchange resin has a quaternary ammonium group and a carboxy group incorporated on a cross-linked polystyrene frame.

8. A process according to either of claim 7 or claim 1, wherein the eluent is water and the chromatographic process is carried out isocratically.

9. A process according to either of claim 7 or claim 1, wherein the eluent fed into the process is a combination of water and an organic solvent.

10. A process according to claim 9, wherein the organic solvent is methanol.

11. A process according to claim 10, wherein the eluent supplied to the process includes at least about 15 percent by weight up to about 50 percent by weight of methanol with the remainder of water.

12. A process according to claim 9, wherein the organic solvent is acetone.

13. A process according to claim 12, wherein the eluent supplied to the process includes at least about 5 percent by weight of acetone.

14. A process according to claim 13, wherein the eluent supplied to the process includes at least about 10 percent by weight of acetone.

15. A process for chromatographically separating propionic acid esters from an acrylate ester composition containing ~~excess~~ propionic acid esters, comprising contacting the acrylate ester composition with an amphoteric ion exchange resin and eluting propionic acid esters into a raffinate such that a reduced propionic acid ester acrylate ester product is recovered in an extract.

16. A process according to claim 1, further comprising hydrogenating residual acrylic acid in the raffinate in the presence of a source of hydrogen to form propionic acid therefrom.

17. A process according to claim 1, further comprising oxidatively dehydrogenating propionic acid in the raffinate to form additional acrylic acid therefrom.

18. A process according to claim 15, further comprising hydrogenating residual acrylate esters in the raffinate in the presence of a source of hydrogen to form propionate esters therefrom.

19. A process according to claim 15, further comprising oxidatively dehydrogenating propionic acid esters in the raffinate to form additional acrylate esters therefrom.

20. A process for making a reduced propionic acid content acrylic acid product, comprising removing propionic acid from an acrylic acid composition containing ~~excess~~ propionic acid both by melt crystallization and by adsorbing propionic acid onto an amphoteric ion exchange resin.

21. A process according to claim 20, further comprising producing the acrylic acid composition containing ~~excess~~ propionic acid at least in part by performing a catalytic oxidation of propane with an oxygen source, in the presence of a catalyst and under conditions which are suitable for carrying out the oxidation.

22. A process according to claims 20 or 21, further comprising producing the acrylic acid composition containing ~~excess~~ propionic acid at least in part by carrying out a dehydration of glycerol to yield acrolein and then oxidizing acrolein to provide acrylic acid.

23. A process according to claim 22, further comprising producing the acrylic acid composition containing ~~excess~~ propionic acid at least in part by dehydration of lactic acid and/or one or more lactate esters.

24. A process according to claims 20 or 21, further comprising producing the acrylic acid composition containing ~~excess~~ propionic acid at least in part by dehydration of lactic acid and/or one or more lactate esters.