CLAIMS:

1. A process for purifying methyl methacrylate; said process comprising: (a) feeding a reaction product mixture comprising methanol, methyl methacrylate and alkali metal salts thereof, methacrolein, water and heavy byproducts to a distillation column having at least 15 trays; wherein said reaction product mixture and a C_6-C_7 hydrocarbon enter the distillation column above the middle of the distillation column; (b) removing an overhead stream comprising C_6-C_7 hydrocarbon, methacrolein, methanol, water and methyl methacrylate; and (c) removing a bottoms stream comprising water, methyl methacrylate and its alkali metal salt and heavy byproducts.

2. The process of claim 1 wherein the reaction product mixture comprises at least 0.8 wt% of the sodium salt of methyl methacrylate.

3. The process of claim 2 wherein the reaction product mixture comprises from 1 to 10 wt% water.

4. The process of claim 3 wherein the reaction product mixture enters the distillation column in the highest 30% of the trays.

5. The process of claim 4 wherein C_6-C_7 hydrocarbon is a saturated hydrocarbon having an atmospheric pressure boiling point from 65 to 100°C.

6. The process of claim 5 wherein a portion of the overhead stream returns to the distillation column in the highest 30% of the trays and the amount of the C_6-C_7 hydrocarbon in said overhead stream which enters the column is from 2 to 10 times the amount of methanol in the reaction product mixture.

7. The process of claim 6 wherein the reaction product mixture enters the distillation column in the highest 20% of the trays.

8. The process of claim 7 wherein the distillation column has from 20 to 40 trays.

9. The process of claim 8 wherein the reaction product mixture enters the distillation column in the highest four trays.