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Abstract

In a process for the continuous preparation of alkyl esters of (meth)acrylic acid by reacting (meth)acrylic acid with alkanols having
10 from 1 to 8 carbon atoms in a homogeneous, liquid, solvent-free phase at elevated temperature and in the presence of an acid esterification catalyst, in which the (meth)acrylic acid, the alkanol and the acid catalyst are fed to a reaction zone, the water formed is removed by rectification during a residence time as constituent of a mixture comprising starting alkanol in a
15 rectification unit (III) superposed on the reaction zone, the distillate obtained is separated into an organic phase comprising alkanol and an aqueous phase comprising water, the organic phase is essentially completely returned to the rectification unit (III), the reaction mixture is discharged from the reaction zone and conveyed into a distillative
20 separation zone comprising further rectification units and in the latter the alkyl (meth)acrylate formed is separated off.

a) (Meth)acrylic acid and alkanol are reacted in a molar ratio of from 1:0.75 to 1:2, b) part of the aqueous phase obtained at the top of the
25 rectification unit (III) is returned to the rectification unit, c) the reaction mixture discharged from the reaction zone is fed to a further rectification unit (I) and in this the reaction mixture is separated into a product (II) comprising the catalyst and a product (I) comprising the alkyl ester of (meth)acrylic acid, remaining alkanol and remaining (meth)acrylic acid,
30 and d) the product (I) is fed to a further rectification unit (II) and in this



the alkyl ester of (meth)acrylic acid is separated from the remaining alkanol and from the remaining (meth)acrylic acid and the remaining alkanol and the remaining (meth)acrylic acid are returned to the reaction zone.