the alcohol reactant. This process in addition does not provide for the recycling of the catalyst.

Surprisingly, it has been found that, in the case of 2-octyl acrylate, the removal of the catalyst using a conventional boiler and not a film evaporator does not result in the formation of impurities, such as ethers or octanes.

The applicant company, seeking to solve the various problems of the abovementioned processes, has thus discovered a simplified manufacturing process for producing 2-octyl acrylate of very high purity with a high yield, while including the recycling of the economically upgradable products, such as the unreacted reactants and the catalyst, and thus exhibiting a productive output compatible with manufacture on the industrial scale.

The solution provided consists in using ethyl titanate in solution in 2-octanol or 2-octyl titanate as transesterification catalyst and in employing a purification train comprising only two distillation columns.

The present ~~invention~~ disclosure makes it possible in addition to produce an acrylic ester comprising carbon of renewable origin related to the use of the 2-octanol, which is an alcohol derived from plant matter.

SUMMARY ~~OF THE INVENTION~~

~~A subject matter of the present invention is~~In an aspect, there is provided a process for the continuous production of 2-octyl acrylate by a transesterification reaction between a light alcohol acrylate and 2-octanol in the presence of an alkyl titanate as transesterification catalyst and at least one polymerization inhibitor, the azeotropic mixture composed of light alcohol acrylate and of light alcohol generated by the transesterification reaction being withdrawn continuously during the reaction, the reaction mixture being subjected to a purification treatment comprising two distillation columns, in order to obtain, on the one hand, the pure 2-octyl acrylate and, on the other hand, the unreacted 2-octanol and light alcohol acrylate compounds intended to be recycled, and also the catalyst intended to be recycled, which process is characterized in that:

- the catalyst is chosen from ethyl titanate in solution in 2-octanol and 2-octyl titanate;
- the crude reaction mixture comprising the desired 2-octyl acrylate with, as light products, the unreacted 2-octanol and light alcohol acrylate and, as heavy products, the catalyst, the polymerization inhibitor or inhibitors and also heavy

reaction products is sent to a first distillation column (B) under reduced pressure and a distillation is carried out, in said first column (B), which makes it possible to obtain:

- at the top, a stream composed essentially of unreacted 2-octanol and light alcohol acrylate, with a minor fraction of 2-octyl acrylate, and
- at the bottom, a stream comprising 2-octyl acrylate, the catalyst, the polymerization inhibitor or inhibitors and the heavy reaction products and traces of light compounds; then

- the bottom stream from the first distillation column (B) is sent to a second distillation column (C) under reduced pressure, in which a distillation is carried out which makes it possible to obtain:
  - at the top, the desired pure 2-octyl acrylate; and
  - at the bottom, the catalyst, the polymerization inhibitor or inhibitors and the heavy reaction products, and 2-octyl acrylate;
- the bottom stream from the second distillation column (C) is recycled to the reaction, at least in part.

The disclosure~~invention~~ is now described in more detail and without implied limitation in the description which follows, with reference to the single appended figure, which diagrammatically represents a plant which makes it possible to implement the process ~~according to the invention~~as defined above.

DETAILED DESCRIPTION

One of the objectives of the invention is to use starting materials of natural and renewable origin, that is to say biosourced.

The 2-octanol used in the process according to the invention is an alcohol of renewable origin; in particular, it can be obtained by alkaline treatment of ricinoleic acid derived from castor oil.

The light alcohol acrylate employed as starting material in the process according to the invention is obtained by direct esterification of acrylic acid, essentially produced industrially from propylene, with a light alcohol, generally methanol or ethanol.

Independently of the use of 2-octanol of renewable origin, the invention extends to the use of a light alcohol acrylate derived from acrylic acid of renewable origin, which can in particular be obtained from glycerol, according to a process comprising a first stage of dehydration of the glycerol to give acrolein, followed by a stage of gas-phase