

Method for producing α,β -unsaturated C₁₀-aldehydes**Abstract**

The invention relates to a method for continuously producing α,β -unsaturated C₁₀-aldehydes from aliphatic C₅-aldehydes, comprising the following steps: aldol-condensing aliphatic C₅-aldehydes into α,β -unsaturated C₁₀-aldehydes in the presence of an aqueous base in a tube reactor; phase separating the output of the tube reactor into an aqueous catalyst phase and an organic product phase; separating the organic product phase into α,β -unsaturated C₁₀-aldehydes, aliphatic C₅-aldehydes, and auxiliary products; discharging a part of the aqueous catalyst phase to remove the reaction water and supplementing said part with liquor solution and subsequently returning said part to the tube reactor. The task of the invention is to improve a method of said kind in a way such that it requires lower energy input. This is achieved in that the aliphatic C₅-aldehydes and/or the α,β -unsaturated C₁₀-aldehydes are dispersed in the aqueous base as drops, wherein the average Sauter diameter of the drops is between 0.2 mm and 2 mm.

No suitable figure.