Process for isolating pure butyl acrylate from crude butyl acrylate by distillation, where butyl is n-butyl or isobutyl

Abstract

Process for isolating pure butyl acrylate from crude butyl acrylate, where butyl is n-butyl or isobutyl, by distillation, wherein the process is carried out in a dividing wall column (1) which has separation-active internals and vaporizer (7) and in which a dividing wall (8) is arranged in the longitudinal direction of the column to form an upper joint column region (9), a lower joint column region (14), an inflow section (10, 12) having a side feed point (2) and an offtake section (11, 13) having a side offtake point (3), the column has a number of theoretical plates in the range from 20 to 80, where the number of theoretical plates of the dividing wall column (1) relates to the sum of the theoretical plates in the joint upper column region (9), the joint lower column region (14) and the inflow section (10, 12), the side feed point (2) for the crude butyl acrylate is arranged at a theoretical plate in the region commencing at least two theoretical plates above the bottommost theoretical plate and ending at least two theoretical plates below the uppermost theoretical plate, the side offtake point (3) for the pure butyl acrylate is arranged at a theoretical plate in the region commencing at least two theoretical plates above the bottommost theoretical plate and ending at least two theoretical plates below the uppermost theoretical plate and the dividing wall (8) is arranged in the column in the region commencing at least one theoretical plate above the bottommost theoretical plate and ending at least one theoretical plate below the uppermost theoretical plate, where the ratio of amount of liquid at the upper end of the dividing wall (8) going to the enrichment section (10) and the stripping section (11) of the column is set in the range from 1:0.2 to 1:5.