Abstract

The invention provides a process for preparing aldehydes by a homogeneously catalyzed hydroformylation of C4 to C20 olefins, in which a biphasic stream (liquid/gaseous) is withdrawn and expanded in two stages. Before those, between those or after those, the liquid phase is cooled. Only after expansion and cooling is the homogeneously dissolved rhodium catalyst system separated from the residual stream in a three-stage removal step.

[No figure]