

Abstract**Preparation of butadiene by oxidative dehydrogenation of n-butene after prior isomerization**

The invention relates to a process for preparing 1,3-butadiene by heterogeneously catalysed oxidative
5 dehydrogenation of n-butene, in which a butene mixture comprising at least 2-butene is provided. The
problem that it addresses is that of specifying a process for economically viable preparation of 1,3-
butadiene on the industrial scale, which is provided with a butene mixture as raw material, wherein the
1-butene content is comparatively low compared to the 2-butene content thereof, and in which the
ratio of 1-butene to 2-butene is subject to variation. This problem is solved by a two-stage process in
10 which, in a first stage, the butene mixture provided is subjected to a heterogeneously catalysed
isomerization to obtain an at least partly isomerized butene mixture, and in which the at least partly
isomerized butene mixture obtained in the first stage is then subjected, in a second stage, to oxidative
dehydrogenation. The two-stage process leads to higher butadiene yields compared to the one-stage
process.

15 **Figure 2 relating to the abstract**