

Process for preparing formic acid by reaction of carbon dioxide with hydrogen

Abstract

- 5 A process for preparing formic acid by reaction of carbon dioxide (1) with hydrogen (2) in a hydrogenation reactor (I) in the presence of
- a catalyst comprising an element of group 8, 9 or 10 of the Periodic Table,
 - a tertiary amine comprising at least 12 carbon atoms per molecule and
 - 10 - a polar solvent comprising one or more monoalcohols selected from among methanol, ethanol, propanols and butanols,
- to form formic acid/amine adducts as intermediates which are subsequently thermally dissociated, where the work-up of the output (3) from the hydrogenation reactor (I) is
- 15 carried out by addition of water so as to increase the distribution coefficient of the catalyst between the upper phase (4) and the lower phase.
- 20 (Figure 1)