

Method for producing formic acid

Abstract

- 5 Process for preparing formic acid by hydrogenation of carbon dioxide in the presence of a catalyst comprising an element of group 8, 9 or 10 of the Periodic Table, a tertiary amine and a polar solvent at a pressure of from 0.2 to 30 MPa abs and a temperature of from 20 to 200°C to form two liquid phases, separation of the two liquid phases, wherein the liquid phase (B) enriched with the tertiary amine is recirculated to the
- 10 hydrogenation reactor and the formic acid/amine adduct from the liquid phase (A) enriched with the formic acid/amine adduct and the polar solvent is thermally dissociated into free formic acid and free tertiary amine in a distillation unit and the tertiary amine liberated in the dissociation and the polar solvent are recirculated to the hydrogenation reactor.

Figure 1