

Abstract of the disclosure:

The present invention provides a process for production of amide compounds, which includes converting a nitrile compound into its corresponding amide compound by hydrating the nitrile compound in the presence of a cultured broth of bacterial cells, intact bacterial cells, disrupted bacterial cells or enzymes contained therein, or immobilized preparations obtainable by immobilizing intact bacterial cells, disrupted bacterial cells or enzymes contained therein, the bacterial cells being those of a biologically pure culture of a thermophilic microorganism having hydration activity to convert a nitrile compound into its corresponding amide compound, such as *Bacillus smithii* SC-J05-1 (FERM BP-4935).

