

Energy saving processes of biofuel production from fermentation broth

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ABSTRACT

The energy used for distillation in bioethanol production reaches the 40 % of the total energy demand. The pervaporation is an important alternative process to distillation that can be applied as a hybrid process or even as a single process to produce high quality biofuel. It will be shown how the energy demand, MJ/kg_{Ethanol} energy, can be saved applying pervaporation process with different separation factors and operating modes. It is stated that relatively high separation factor is needed to lower the energy demand below a simple distillation column.