

Optimization of enzymatic synthesis of 3-O- β -D-glucopyranoside betulinic acid by Novozyme-435

ABSTRACT

The enzymatic synthesis of 3-O- β -D-glucopyranoside betulinic acid using Novozyme-435 as a catalyst was studied. The effects of various parameters such as reaction temperature, reaction time and amount of enzymes were investigated. The optimum reaction conditions for the synthesis of 3-O- β -D-glucopyranoside betulinic acid was obtained using 30.67 h, 54.30°C and 180 mg of enzymes using betulinic acid (0.05 mmol) and glucose (0.1 mmol) respectively. The actual percentage yield under these conditions was 88.69 % and the predicted value was 89.05 %.

Keyword: Enzymes; Enzymatic synthesis; 3-O- β -D-glucopyranoside betulinic acid; Novozyme-435; Optimization