ABSTRACT

The *Wickerhamomyces anomalus* yeast strain ZM-18 was used to ferment the saccharified mixture, supplemented with medium components, for the production of bioethanol. Nineteen different fermentation media were tested. Out of which maximum bioethanol yield (1.09 g/L; $p < 0.05$) was observed in 'C1 Yeast extract, peptone, glucose' medium. Optimization of different cultural parameters was carried out to enhance bioethanol production. Maximum bioethanol yield was obtained by applying 5 days of incubation at 25°C using surface culture fermentation. Glucose + xylose in a concentration of 2 g and 1.5 g were optimized, respectively, as best carbon sources. Ammonium dihydrogen phosphate (2 g) was optimized as a best nitrogen source. Four hours old inoculum in a concentration of 3.5 % was optimized for maximum bioethanol yield. Optimization of these parameters resulted in increased bioethanol production (5.0g/L) by 5.02 folds.