ALCOHOLIC AND NON-ALCOHOLIC BEVERAGES FROM CORN MALT

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Malt powder was prepared by malting corn for 5 days, drying in the sun for two days and powdering in a commercial mill. Corn malt powder was roasted in an oven at 50°C for 4h to increase the flavour. Extract (3.5l) was prepared from 1kg corn malt powder by the action of endogenous and exogenous amylases. The malt extract contained $10gl^{-1}$ reducing sugar $150gl^{-1}$ total sugar, $5gl^{-1}$ protein and $.2gl^{-1}$ calcium. One litre of malt extract (DE 60) at pH 4.5 was inoculated with $5gl^{-1}$ bakers yeast and allowed to ferment at room temperature. After the fermentation (72h) a malty flavoured dark brown coloured clear alcoholic beverage was obtained. Alcohol strength, acidity and the amount of non-fermented carbohydrate of the alcoholic beverage were $30gl^{-1}$, $4gl^{-1}$ and $137.5gl^{-1}$ respectively. The alcohol strength of the beverage increased from $30gl^{-1}$ to $78gl^{-1}$ and the nonfermented carbohydrate decreased from $137.8gl^{-1}$ to $36gl^{-1}$ when the extract was treated with glucoamylase and yeast simultoneously and the efficiency of ethanol produced was 89%.

In the preparation of non-alcoholic beverage (maltova) one liter of extract (DE, 60) was evaporated in a sand bath. The dry residue was mixed with milk powder, sucrose, cocoa and glucose, and was futher dried and powdered. This prepertion is comparable to Maltova in its organoleptic properties and could be readily reconstituted by mixing with milk, tea or coffee to provide a good non-alcoholic beverage.