

## Research on Physical Properties and Determination of Polysaccharide Content in Aloe

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**ABSTRACT** Four species of common aloes , i.e. , *A. barbadensis* Mill , *A. vera* L. ver. Chinesis( Haw ) , *A. arboreccens* Mill , *A. ferox* Mill have been used for the comparative research on the their physical properties and chemical compositions. Results indicated that the density of the whole leave juice and gel juice for the four aloes is in the order of *A. ferox* Mill > *A. arboreccens* Mill > *A. barbadensis* Mill  $\approx$  *A. vera* L. ver. Chinesis Haw . The pH of all juices was between 4.24 to 5.25. The acidity of the whole leave juice for *A. ferox* Mill and *A. vera* L. ver. Chinesis Haw was higher than that of their gel juice , and for the other two aloes the opposite trend was observed. Their viscosity was in the order of *A. vera* L. ver. Chinesis Haw > *A. barbadensis* Mill  $\gg$  *A. ferox* Mill  $\approx$  *A. arboreccens* Mill. The curves of viscosity varying with temperature for the four aloes were obtained. The content of total carbohydrate and polysaccharide of the four aloes was analysed with different proper methods. Attempts were made to improve these methods in this experiment. The order of the total carbohydrate content was *A. vera* L. ver. Chinesis Haw  $\approx$  *A. arboreccen* Mill  $\gg$  *A. barbadensis* Mill  $\approx$  *A. ferox* Mill , and for the polysaccharide , that is *A. vera* L. ver. Chinesis Haw > *A. barbadensis* Mill  $\gg$  *A. ferox* Mill  $\approx$  *A. arborecoens* Mill which was consistent with their viscosity.

**Key words** aloe , density , viscosity , total carbohydrate , polysaccharides



### 美国发明啤酒连续熟化法

美国酿酒界发明了一种采用酵母发酵、连续熟化啤酒的方法 ,并获得了专利。该方法有效地熟化啤酒 ,对啤酒的风味及特性无任何影响 ,并能连续生产 ,且酿造成本显著降低。

酵母发酵连续熟化酒的方法是 ,在啤酒初发酵后 ,将所有酵母基本上从发酵啤酒中除去 ,在高压下 ,对啤酒进行热处理( 60 ~ 90℃ ) ,使  $\alpha$ -乙酰乳酸及其他双乙酰前体物转化为双乙酰 ,然后将啤酒冷却至 25℃ 以下 ,再将啤酒进入固定化酵母柱中反应 ,使双乙酰转化为 3-羟基-2-配酮 ,从而降低双乙酰浓度。

### 加拿大 2003 ~ 2004 年度大麦、小麦产量预测

据加拿大小麦局预测 ,2003 ~ 2004 年度大麦的产量为 1270 万 t ,比 2002 ~ 2003 年度增长 620 万 t ,小麦产量预计会显著增长达到 2320 万 t ,杜伦小麦的产量将增长到 490 万 t。