

苹果汁酶解工艺参数对感官品质与香气构成的影响    Effect of Pectinase Processing Parameters on Sensory Quality and Aroma Components of Apple Juice

李华 李敏 岳田利

西北农林科技大学

关键词: 苹果汁 酶解 感官品质 香气 响应面分析

摘要: 利用响应曲面分析方法,研究了苹果汁酶解工艺参数(果胶酶用量、酶解温度、酶解时间)对苹果汁感官品质及香气构成的影响。结果表明:酶解时间、酶用量对苹果汁感官品质的影响极为显著( $P < 0.01$ ),因素主次效应为:酶解时间、酶用量、酶解温度。苹果汁酶解的最佳工艺参数为:果胶酶用量 $0.04 \text{ g/L}$ ,酶解时间 $2.77 \text{ h}$ ,酶解温度 $47.5^\circ\text{C}$ 。利用顶空固相微萃取方法对苹果汁香气成分进行分析,并通过多元回归分析构建出苹果汁中主要香气成分酯类、醇类、酸类和醛酮类与工艺参数间的回归模型。The effect of pectinase processing parameters, including enzyme dosage, hydrolysis temperature and hydrolysis time, for apple juice on its sensory quality and aroma component was conducted using response surface methodology. The results show that enzyme hydrolysis time and dosage had a significant effect on the sensory quality of apple juice ( $P < 0.01$ ). The influencing sequence from high to low are as follows: enzyme hydrolysis time, enzyme dosage, enzyme hydrolysis temperature. In conclusion, we recommended that the optimum pectinase processing parameter for apple juice is  $0.04 \text{ g/L}$  pectinase at  $47.5^\circ\text{C}$  for  $2.77 \text{ h}$ . Moreover, we constructed a regression model between the main aroma components of apple juice, esters, alcohols, acids, aldehydes and ketones, and processing parameters by headspace solid-phase micro-extraction method and multiple regression analysis.

[查看全文](#) (请使用Adobe Acrobat 6.0版本浏览) [返回首页](#)

[引用本文](#)