



**E531**

### **Effect of agitation speeds on lipase production by *Yarrowia* yeasts**

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The yeast *Y. lipolytica* can synthesize extracellular lipases, which have broad variety of industrial applications. The aim of this research was to study the lipase production of some newly isolated *Yarrowia* strains (two *Y. lipolytica* and two *Y. divulgata* strains). The fermentation was carried out in media containing olive oil at different agitation rates: 0, 100, 130, 160 rpm. Changes in pH and cell growth were also monitored. It can be concluded that the pH decreased continuously over time for most strains at almost all agitation rates. On the basis of the OD values, the growth of the cells was observed all the tested agitation rates. However, the lipase activity was very low during fermentation without aeration. The best lipase producing strain was *Y. lipolytica* 854/4 during all settings, but there is a significant difference between the lipase activities at different agitation rates. For the two strains of *Y. divulgata*, *Y. divulgata* NCAIM Y.02062 proved to be the better lipase producer for all four shaking speeds. The most effective aeration was at 130 rpm for all strains. At this setting the lipase production was at least two to three times higher than at the other three agitation rates.

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### **Effect of Argon gas on sliced iceberg lettuce during storage**

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Changes in consumer habits have also led to an increase in demand for ready-to-eat products, including sliced, washed salads. Increased demand requires an increase in storage potential. The shelf life of sliced, washed salads is very short, only a few days to a week, so increasing the storability by even a few days can be a significant improvement for ready-to-eat salads. According to some studies the argon gas used inside modified atmosphere packaging can affect the shelf life of sliced lettuce and help preserve its crispness and freshness. In our tests, we mixed different concentrations of argon gas (0%, 4%, 10% and 20%) into MA packages containing lettuce and monitored the changes in gas composition and changes in the lettuce during the two-week storage. Based on the results obtained, it was concluded that argon has a minimal positive effect on the crunchiness and shelf life of lettuce, but also has some effect on its taste.