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Fermentative Strength of Yeasts Strain, Naturally Isolated Using Common Date in South-West of Algeria

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Abstract: The bioconversion of by-products coming from the date palm can constitute future projects for the recovery and development of arid and semi-arid regionsof North Africa, Middle East and South Asian countries. The treatment of common dates of low commercial value using biochemical transformations provides new efficient products with added-value easy to commercialize at high price. Among these derivative products we notice the syrups, the alcohols, the yeasts and others substances. The conversion involves complex biochemical processes based on varioustypes of microorganisms; each one has its specificity and role among the biotechnological processes. The yeast strain plays a major role in an alcoholic transformation because it consumes simple sugars of dates and converts them into ethanol. The composition of the substrate and the control of the fermentation process are also important.

In the present paper, we are studied one variety of common dates, having low commercial value originated from Adrar province in south Algeria called (*Tinaceur*) as a substrate to isolate new efficient yeast strains for using them in the alcoholic fermentation to produce a bioethanol compared to the use of commercial well-known yeast strain *Saccharomyces cerevisiae*. The main objective of the present work includes the isolation of new yeast strains from the mash of dates during the fermentation process and determination the fermentative strength of this strain on the substrate of the variety of dates studied by physical and chemical analysis of (pH, juice density, alcohol concentration, total sugar and Brix degree).

Keywords. South-West of Algeria, common date (Tinaceur), yeast strain (*Saccharomyces cerevisiae)*, alcohol fermentation, bioethanol.

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