

The biochemical properties of some yeast species of the
Armenian SSR

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Various kinds of yeasts are distributed in the territory of Soviet Armenia. The variability of the natural-historical and soil-climatic conditions of the republic influences not only the vegetation cover but also the micro-organisms inhabiting it. Thus, the study of micro-organisms has an important significance in determining their active role in the technological processing of agricultural raw materials.

Many strains of yeast-like fungi have been isolated from fruits and berries during our studies. They belong to different species and can be used in various branches of industry.

The use of pure yeast cultures with definite characteristics is of great importance in the various problems of the wine-making industry. The investigations showed that the yeast organisms have intensive fermentive activities and belong to the types *Saccharomyces vini* and *Saccharomyces oviformis*.

The strain Armenia 490, isolated by us, differs from other yeast cultures in various fermentive abilities. This culture mainly ferments white-grape juice producing more than 14 per cent alcohol within 5 days and it develops in a must with up to 33 per cent of sugar (Sarukhanian, 1960).

Our investigations have shown that the strain Armenia No. 490 has antagonistic properties against lactobacilli and acetobacter which turn wine sour (Sarukhanian and Sevoyan 1965).

While using this strain, the content of the B-group vitamins in wine is increased several times in comparison with the unfermented must.

Alcohol-resistant and pellicle-forming yeasts which belong to the *Saccharomyces oviformis* type were chosen (Unanian, 1966). These strains form a massive pellicle on wine with 16-17 per cent of alcohol and are used to produce sherry-type wine. The optimum PH of the Armenian alcohol-resistant cultures of sherry yeasts lies in the range 3, 4 - 3, 6, i.e. 0,2 PH more than the yeasts of Spanish origin. The optimum temperature for normal growth lies between 18°-20° C.

The investigation of the main components of wine while kept under the pellicle of the new sherry yeasts, showed that these cultures possess a high ability to oxidize alcohol, up to 16,2 per cent, into aldehydes and other components with the formation of the specific sherry flavour in the wine.