EQUILIBRIUM AND KINETIC PARAMETERS FOR THE SEDIMENTATION OF TARTARIC SALTS IN YOUNG WINES

Ecaterina Covaci^{a*}, Gheorghe Duca^b, Rodica Sturza^c

^aInstitute of Chemistry, Academy of Sciences of Moldova, 3, Academiei str., Chisinau MD-2028, Republic of Moldova ^bAcademy of Sciences of Moldova, 1, Stefan cel Mare str., Chisinau MD-2001, Republic of Moldova ^cTechnical University of Moldova, 168, Stefan cel Mare str., Chisinau MD-2004, Republic of Moldova ^{*}e-mail: covaci_ecaterina@yahoo.com; phone: (+373) 69 305 475

Abstract. In young wines potassium hydrogen tartrate is always present in supersaturating concentration and crystallizes spontaneously. The aim of this study is to obtain kinetic parameters, which explain the stability of young wines during the stabilization treatments. The kinetic and equilibrium parameters were evaluated and discussed. The heating factor has a decisive influence on the reaction rate of potassium hydrogen tartrate precipitation in young wines. An increase of temperature leads to a decrease in efficiency of stabilization process and to an enhancement of the activation energy of the system. According to the obtained experimental results, the optimal regime for production and stabilization of young wines has been established.

Keywords: kinetic parameters, young wines, crystalline stabilization, Arrhenius plots.

Received: February 2015/ Revised final: April 2015/ Accepted: April 2015