

Natural pectins: oxidative destruction and interaction with uracils

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Abstract

On the basis of studying the kinetics of oxydative desctruction of cytrous and apple pectins we find the conditions for obtaining oxydative fractions of polysaccharides with prescribed molecular masses. By means of spectral methods, we study the interactions of pectins and its oxydative fractions ($M_{\text{aver.}} \sim 20\text{-}25$ kDa) with uracil and its derivatives (UD). We define the composition and stability constants of creating complex compounds. It is found that the compounds' composition is equal to 1 : 1, i.e., one carboxyl group of pectin (or of its oxydized fraction) interacts with one molecula of UD. It is shown that electricdonor substituents located at the fifth position of 6-methyluracil increase the stability of its complexes with apple pectins and its oxydative fraction.