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The invention relates to the agriculture, in particular, to the viticulture, to determination of the vining plants frost resistance.

Summary of the invention consists in the elaboration of a method of determining the vining plants frost resistance, including collection of average samples from the investigated plants, freezing thereof in a special thermal vacuum chamber, preparation of bast/eye samples, lyophilization and milling thereof up to the pulverulent state, extraction of glucides and separation thereof by preparatory chromatography in a thin layer of silica gel, elution of glucose and fructose hexoses, tracing of spectra thereof in the infra-red field and measurement of optical densities in the absorption band region, corresponding to the asymmetric stretching vibrations $n_{as.OH}(D_1)$ and $n_{as.CH_2}(D_2)$. Determination of the plant frost resistance is carried out on the basis of comparative analysis of the ratios D_1/D_2 for the tested plant and the known variety. The more the ratio D_1/D_2 for the tested plant in comparison, with the known variety, the higher the frost resistance of plants.

The result consists in increasing the precision of determining the vining plants frost resistance.