

The aim of this diploma thesis is to find out in what way inorganic pigments influence the identification of egg and yolk tempera using mass spectrometry MALDITOF (matrix-assisted laser desorption/ionization time of flight). The other aim was to prepare a set of model color layers including ten inorganic pigments combined with the egg and yolk tempera. Using the method of peptide mass fingerprinting mass spectra of the samples were found out and the obtained peptides were compared. Finally the egg tempera was distinguished from the yolk tempera and it was found which pigments negatively influenced the identification of the temperas.

The m/z values were found out for both temperas and they were used to upgrade database of the reference proteinaceous binders that have been used in art works.