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Inventory of the Kirillo-Belozersky Monastery (1615): An Experience of Using Spectrosonal Visualization to Reconstruct the History of the Text

Abstract

The article describes the results of a codicological study of the Inventory of the Kirillo-Belozersky (St. Cyrill of Beloozero) Monastery (1615). The main codicological problem for

the researchers posed by this monument is its numerous and asynchronical edits. It is possible to identify edit layers by studying the ink by means of spectrosonal imaging in near-IR wavelength region of the spectrum. This method is based on the property of inks (except those with a carbon base) to acquire transparency beyond the visible region of the spectrum (after 700 nm). As additional information, visually observed (in natural indirect daylight) color differences between inks have been used, as well as color estimation using a digital portable microscope Dinolite with Dinoscope software. As a result of the study, the main stages of work on the Inventory have been established. A significant part of the marginalia are in the same ink and handwriting as the main text: brown, with moderate transparency in near-IR wavelength region. Thus, the text was probably supplemented in the course of creation. This edit was accompanied by the text on the insert sheets made in ink that is slightly translucent in the IR region of the spectrum and has a dark brown color. The same ink was used in the main text of the manuscript. When the main text was rewritten in 1616-1617, it was compiled in a codex and significantly revised for the first time. The marker of this revision stage is light brown and yellowish-brown ink with high degree of transparency in IR wavelength region of the spectrum. In addition to the editing, the notebooks are numbered in the same light brown ink. The edit of this layer mainly included clarifications to the items description. The next significant revision of the inventory text, marked with brown ink that has low transparent in the IR wavelength region of the spectrum, refers to the period after July 22, 1621. Most of these edits, as well as the earlier ones, were devoted to clarifying descriptions, to clarifying location of objects, and to describing the monastery's acquisitions and losses. Apparently, the later stage of editing is associated with the use of gray-brown ink, similar in spectral behavior to the ink of the main text. The record of the contribution of Prince Khvorostinin made in 1622–23 was written in this ink.

### Keywords

Historical source, spectrosonal visualization, codicology, textology, Kirillo-Belozersky monastery, ink, Ancient Russian writing, monastic inventories.

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