
報 文

幕末・明治時代の赤地古裂に用いられた天然染料 および初期合成染料の分析

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Identification of Natural and Early Synthetic Red Dyes Used in Silk Fabrics Dated to the Late Edo-Meiji Period

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Abstract

The two major issues in dye analysis of textiles made in the initial period of early synthetic dyes are to identify the dyes used, especially to distinguish between natural dyes and synthetic dyes, and to obtain information about the characteristics of these early synthetic dyes for proper conservation. In this study, we focus on base natural and synthetic red dyes. Silk kimono fabrics which could be dated to the late Edo period or Meiji Era were examined. By using multiple comparatively simple analytical methods (visual examination, spectroscopic analysis, extraction test, etc), natural dye identification and synthetic dye class identification were carried out. First, mainly based on the results of the extraction test the 14 items were divided into two categories: eight with natural dye and six with synthetic. Second, ultraviolet-visible absorption spectra of the extracts were measured to identify the natural dyes used. Safflower and Sappan wood dye were found. Third, dye class identification was carried out by dyeing test on various fibers, and acid dye was detected. Practical information on appropriate care of the kimono fabrics was obtained not only from the results of identification but also by observation during the process of analysis.

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