

Klara Retko

*Institute for the Protection of Cultural
Heritage of Slovenia;
University of Ljubljana, Faculty of
Chemistry and Chemical Technology
klara.retko@zvkd.si*

Simona Škorja

Museum of Modern Art

Lea Legan

*Institute for the Protection of Cultural
Heritage of Slovenia;
National Museum of Slovenia*

Petra Bešlagić

*Institute for the Protection of Cultural
Heritage of Slovenia*

Rok Hafner

*Institute for the Protection of Cultural
Heritage of Slovenia*

Lidija Korat Bensa

*Slovenian National Building and Civil
Engineering Institute*

Rožle Repič

*Slovenian National Building and Civil
Engineering Institute*

Miha Humar

*University of Ljubljana, Biotechnical
Faculty*

Jaka Levanič

*University of Ljubljana, Biotechnical
Faculty*

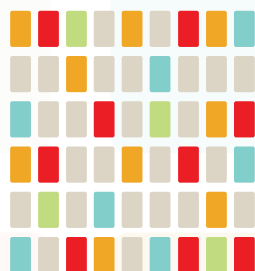
Polonca Ropret

*Institute for the Protection of Cultural
Heritage of Slovenia;
University of Ljubljana, Faculty of
Chemistry and Chemical Technology*

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**3rd Annual Conference
of the Slovenian Node
of the European Research
Infrastructure
for Heritage Science**

*E-RIHS Slovenia
Koper, 18–19 November 2025*



Poster

A Multi-Analytical Study of an Unrestored Floating Component from Slavko Tihec's Kinetic Object Vertikale

Slavko Tihec is one of the most important sculptors of the second half of the 20th century in Slovenia. Since the late 1960s, Tihec incorporated movement into his sculptures, blending abstract art with physical laws in his unique works known as Aquamobiles. These kinetic sculptures, powered by water or electricity, represented a major innovation in 20th-century Slovenian art and remain key pieces in the national modern art collection.

The kinetic object Vertikale represents an important piece of the collection at the Museum of Modern Art (Slovenia). It consists of four parts: 21 floating components, a basin with an electric pump and pipes, a basin cover, and water. Although much of the object was restored in the past, it is currently in poor condition and requires further restoration and conservation.

Moreover, since the original material composition of the floating components remains unknown, this study focuses on analysing an unrestored component that has not previously undergone any treatment. We present a non-invasive and non-destructive multi-analytical approach to determine the material composition of this component. The study combines 3D scanning, X-ray radiography, Raman spectroscopy (using a portable Raman spectrometer), infrared spectroscopy (using a portable reflection FTIR spectrometer), hyperspectral imaging (HSI), and X-ray computed microtomography. X-ray radiography and computed microtomography revealed the internal structure and the presence of compartments. Raman spectroscopy, HSI, and FTIR identified the presence and distribution of pigments and materials such as titanium dioxide (rutile), polyester/alkyd resin, nitrocellulose, and aragonite. The latter indicates limescale deposits. These findings will inform the development of an optimal restoration procedure for the Vertikale kinetic object.

Acknowledgements

The authors would like to thank the Slovenian Research and Innovation Agency (ARIS) for the financial support, following grants (projects): E-RIHS.SI (infrastructure program Io-Eo12), research core funding No. P2 0273 and No. Io-0032.



<https://doi.org/10.26493/978-961-293-546-7.26>