In this work, the methodological approach used for the study of a painting from Pablo Picasso's cubist period is examined in order to verify its authenticity. In a perspective of a multidisciplinary research and activity, the outcomes obtained make it possible to identify a work of art by the Spanish painter which had always been considered lost. The painting was produced by the artist in 1912 during his second stay in Céret (southern France), and several issues about all traces of this work of art were lost until it was discovered in Italy in 2013 remain still unresolved.

**Documentary research**

The striking result is that absolutely no documentary information regarding the artwork has been found. There were no objective elements which allowed us to reconstruct the change of ownership until its discovery in Italy in 2013.

In light of these considerations, its presence in the catalog raisonné of Christian Zervos with the title Violon. Céret, dates 1912 and shown in an excellent black and white photograph, acquires great significance.

Art criticism's lack of attention to Violon. Céret is due to the fact that the painting's whereabouts had always been unknown, meaning it had never been examined directly. It is believed that it is part of a series of works (ten canvases, of which three or four remained unfinished) which the artist created during his short stay (from the 19th of May to the 21st of June) but fruitful stay in Céret in the spring of 1912. Due to the lack of information available regarding this artwork, we have tried to find a documentary confirmation in the extensive correspondence between Picasso and his art dealer Daniel Henry Kahnweiler. Picasso, having to leave his studio in Paris without taking anything with him, informed Kahnweiler about the progress of his work.

The correspondence between the artist and the art dealer were examined to understand the story of the creation and the behind the work of art.

**Imaging and spectroscopy**

The photographic imaging did not reveal any particular lack of homogeneity in the painting. The image of the ultraviolet fluorescence shows many areas on the surface with an easily perceptible fluorescence indicating the presence of organic substances.

The FT-IR-TR spectra acquired in-situ show the characteristic bands of white lead (basic lead carbonate). The non-invasive techniques used did not provide any indication for the identification of the black pigment.

**Analytical pyrolysis**

The pyrolytic profiles of the samples Pipr_01 and Pipr_02 were characterized by the presence of pyrrole, toluene and other aromatic compounds, characteristic markers of a proteinaceous material: we identified the material as animal glue. Both the profiles were also characterized by the presence of hexadecanorninitrile and octadeconinitrile, highlighting the presence of egg.

The Py-GC/MS analysis of sample Pipr_06 showed the presence of levogulcanan and other carbohydrate derived as main pyrolysis products. These analytical results confirmed the vegetable origin of the canvas fibers, identified as flax or hemp also by SEM morphological observations.

The Py-GC/MS analyses of Pipr_07 sample pointed to the presence of traces of betulin and lupenol at high retention times: these triterpenes are characteristic markers of birch pitch.

**Conclusion remarks**

The in-situ non-invasive diagnostic measurements integrated with few microsamples analysed in the laboratory with a range of techniques allowed us to identify the palette and the materials used for the painting of Violon.Céret.

The palette is limited to few colors: white, brown and black, and is completely typical of the period. In this regard, the presence of a triterpenic resin as a material used for black should be emphasized. The artist himself explained this particular when he wrote from Céret the merchant, listing, among other things, the few colors he had available for working. Among these the "mummy brown" is mentioned, which could be made using a pitch. This can be considered a further objective element for the identification of the painting among those works realized by Picasso in Céret.

The analysis on the paint binder allowed us to identify the presence of linseed oil and to exclude Ripolin. Also this information was in agreement with the information on the artist correspondence with his art dealer.

The judgement on authenticity was based on the reported results and the painting has been officially presented by our Minister of Beni e Attività Culturali (Dario Franceschini) as original Picasso's work.