

Metallic elements mainly present on the palette of the most famous painters

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Topic: History of women, the elements and the Periodic Table

Abstract:

Colour is a visual perceptual property derived from the interaction of the light with the light receptors in the eye. A pigment is a material that changes the colour of reflected or transmitted light as the result of wavelength selective absorption. Though it is the actual colouring substance of paint, it has body, in contradiction to purely visual colour. Pigments are usually from inorganic or organic origin, although some are artificially produced, and vary considerably in chemical nature and physical properties.

In this communication a bibliographic study is carried out to identify the metallic elements present in the most frequent inorganic pigments used by some of the most famous painters of the Renaissance (Raphael, Tiziano, El Greco), Baroque (Velázquez, Rembrandt), Impressionism (Monet, Van Gogh) and Vanguardism (Picasso, Kandinsky), including brief illustrations of the analytical methods used to that identification.

Pigments more widely used by these painters, classified by colours, include, blacks (carbon black, bone black), blues (azurite, ultramarine, smalt, cobalt blue, cerulean blue, prussian blue) greens (malachite, green earth, verdigris, viridian, emerald green), browns (realgar, orpiment), reds (vermilion, red lead), whites (lead white, zinc white, titanium white) and yellows (lead-tin yellow, yellow ochre, chrome yellow, cadmium yellow).

From the chemical nature of these inorganic pigments, it can be concluded that Na, K, Mg, Ca, Ti, Cr, Fe, Co, Cu, Zn, Cd, Hg, Al and Sn are the metallic elements of the Periodic Table which are mainly present on the palette of those famous painters.

References

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