

THE TECHNIQUE OF MIXING THE PRIMARY COLORS OF OIL PAINTS WITH EACH OTHER, AS WELL AS WITH THE USE OF CERTAIN TYPES OF SOLVENTS AND OILS

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A B S T R A C T	K E Y W O R D S
An image created using oil paints can compare favorably with other means of imagery. This is because oil paints dissolve in the oil and create a smooth, consistent image that can be more resistant to safety and durability. One of the important characteristics of oil paint is the ability to mix base colors, which allows artists to create an infinite number of shades. And also when mixing paints with some substances, you can get additional different color shades and get a more effective and convenient paint texture for use on various surfaces.	

Introduction

Oil paint potions

Oil paints typically contain three primary colors: yellow, red, and blue. These are called primary colors. Mixing these colors in certain proportions can result in a large number of secondary colors.

To create an orange color

The orange color can be obtained by mixing yellow and red colors in different proportions. If the yellow color is smaller, the orange will be warmer and yellower and vice versa. The orange colors of oil paint can produce warmer tones and, in addition, can create multi-layered effects, which is important for the artist when creating his creativity.

Creating a green color

Green can be created by mixing yellow and blue. As in the previous case, the focus or shade of green depends on the ratio between yellow and blue. With different color ratios, green may appear bluer or more yellow.

Creating a purple color

Creating a purple color is possible by mixing red and blue. As in the previous cases, the choice of proportions of red and blue depends on the expected color scheme. If you need to get a warmer and more lively light, it is recommended to add a little yellow to the color palette.

Mixing paints with certain substances:

1. A solvent is a substance capable of dissolving other solid, liquid, or gaseous substances without chemically altering them. Paint that dries at room temperature contains approximately 45% low-boiling, 45% medium-boiling and 10% high-boiling solvents. Low-boiling solvents provide quick drying of the paint, and high-boiling solvents provide a flat surface of the layer. If the coating dries at elevated temperatures, then the paint, on the contrary, does not contain low-boiling solvents, because when heated, they will swell the surface of the layer. Also important in the formulation of the composition of solvents is played by binder. Also, when creating a composition, the viscosity of the solvent, its effect on the mechanical properties of the paintwork and other parameters, including features of use, are taken into account.

2. Flax oil - Refers to quick-drying oils, as it is easily polymerized in the presence of Oxygenair ("dries") with the formation of a strong transparent film. This ability is due to the high content of Unsaturated fatty acids (in %): 44—61 % alpha-linolenic (Omega-3), 15—30 % Linoleic (Omega-6), 13—29 % Oleic (Omega-9). The content of saturated acids is 9-11%. Flaxseed oil is of great technical importance: it is used to make quick-drying Lucky, drying oil. It is widely used for the production of natural Linoleum and oil paints used in construction and Painting. As the simplest natural drying oil, heat-treated linseed oil is used, since raw oil forms a polymer film too slowly. Therefore, when processing wood with linseed oil, desiccants are added to it to speed up drying. Heat-treated oil dries faster due to the greater number of double bonds formed during heat treatment of the oil. Crude oil is not very popular in wood finishing, mainly double-boiled oil or settled in the open air (for several weeks) is used for this.

3. Turpentine- Turpentine (Terpentine oil, turpentine) is a liquid mixture of terpenes and terpenoids obtained from resins of Coniferous trees (Resin). At their core, they are different Essential oils obtained by the methods Extraction or Distillation from various parts of coniferous trees of the family Pine. The name "turpentine" currently implies a large-tonnage technical product, from relatively heterogeneous raw materials; And "turpentine oil" is a more high-tech product, from selected raw materials (for example, Essential oil from mountain pine needles, Essential oil from juniper wood etc).

4. Kerosene- The origin of the name, according to The Great Soviet Encyclopedia: "Kerosene. kerosene, from Greek kerós— wax)". In the XIX century, the name "photogen" was often used. Kerosene (Eng. kerosene Fr. kerosene From Ancient Greek. wax — «wax») is a combustible mixture of liquid Hydrocarbons (from C_8 before C_{15}) with a boiling point from +150 to +250 ° C, transparent, colorless (or slightly yellowish), slightly oily to the touch, obtained by Direct distillation or Rectification Oil.

When mixing yellow oil paint with various solvents and oils, the following shades can be obtained:

- with a solvent of white alcohol - light yellow;
- with flax oil - bright yellow;
- with turpentine - lemon yellow;
- with kerosene - golden.

When mixing red oil paint with various solvents and oils, the following shades can be obtained:

- with a solvent of white alcohol - light pink;
- with flax oil - rich red;
- with turpentine - bright red;

- with kerosene - dark red.

When mixing blue oil paint with various solvents and oils, the following shades can be obtained:

- with a solvent of white alcohol - light blue;
- with flax oil - sky blue;
- with turpentine - bright blue;
- with kerosene - dark blue.

Inference:

By mixing yellow and red oil paints, an orange color is obtained, when yellow and blue oil paints are mixed, a green color is obtained, and when red and blue oil paints are mixed, a purple color is obtained. When mixing oil paints, you can get new colors that were not in the original set. This is due to the mixing of primary colors in the correct proportion.

Further:

- Yellow oil paint, when mixed with various types of solvents and oils, gives shades from light yellow to golden.
- Red oil paint, when mixed with various types of solvents and oils, gives shades from light pink to dark red.
- Blue oil paint, when mixed with various types of solvents and oils, gives shades from light blue to dark blue.

Creating more complex colors

Due to the ease of creating simple colors such as red, yellow, and blue, many artists prefer to add secondary colors based on the three primary colors. This can create deeper nuances in the creation of shades and tones. It is also possible to add more exotic flowers, such as olive and peach, which can become unusual and interesting.

Conclusion

The technique of mixing the primary colors of oil paints can be very effective and interesting for artists. Much of the work of art can be enhanced by using the right color combinations, which together are capable of creating a new reality. As a result, we can conclude that in the process of creating oil painting, it is necessary to be able to correctly mix the primary colors to achieve the desired shade. There are various mixing techniques, each with its own advantages and disadvantages. It is important to take into account that oil paints are not only a material for work, but also a real art that requires creativity and the ability to use a brush, palette knife. Experience and practice will help the artist to become a real master in creating beautiful and expressive works of art. As a result, mixing the primary colors of oil paints is a process that is associated with a large number of factors and depends on many factors, but the right approach to this process guarantees a successful result.

Bibliography

1. Korsunsky L. Stability of modern artistic oil paints // Artist. 1962, No. 10. S.56-58.
2. Korsunsky L. Diluents of artistic oil paints // Khudozhnik. 1963, No. 12. S.22-24.
3. Orlova O. V., Fomicheva T. N. Technology of varnishes and paints: Textbook for technical schools. — M.: Chemistry, 1990. — T. 3. — 384 p. — ISBN 5-7245-0515-0.

4. Luzhetskaya A. N. The technique of oil painting of Russian masters from the XVIII to the beginning of the XX century. Moscow: Academy of Arts of the USSR, 1965. — 290 p.
5. Chieffo, Clifford T. The contemporary oil painter's handbook: a complete guide to oil painting: materials, tools, techniques, and auxiliary services, for the beginning and professional artist, Englewood Cliffs^[en], N.J.: Prentice Hall, 1976, 130 p.: ill. ISBN 0131701673
6. Borchert, Till-Holger^[de]. Jan Van Eyck: Renaissance Realist (Basic Art), L.: Taschen, 2008 (2nd edition 2020), 96 p.: ill. ISBN 3-8228-5687-8.
7. Turpentine // Commodity dictionary / I. A. Pugachev (editor-in-chief). Moscow: State Publishing House of Trade Literature, 1960. — T. VIII. — Stb. 186—188.
8. Turpentine, substance // Encyclopedic Dictionary of Brockhaus and Efron: in 86 volumes (82 volumes and 4 additional). — St. Petersburg, 1890—1907.
9. Treger Y. A. Solvents // Chemical Encyclopedia: in 5 volumes / Ch. ed. N. S. Zefirov. Moscow: Big Russian Encyclopedia, 1995. - T. 4: Polymer - trypsin. — S. 183–184. — 639 p. — 40,000 copies — ISBN 5-85270-039-8.
10. Stoye D. Solvents (англ.) // Ullmann's Encyclopedia of Industrial Chemistry. — Wiley, 2000. — doi:10.1002/14356007.a24_437.
11. Flaxseed oil // Commodity dictionary / I. A. Pugachev (editor-in-chief). Moscow: State Publishing House of Trade Literature, 1958. — T. V. — Stb. 153—154. — 588 p.
12. Chemical Encyclopedia / Redkol.: Knunyants I.L. et al. Moscow: Soviet Encyclopedia, 1990. — T. 2 (Daf-Med). — 671 p. — ISBN 5-82270-035-5.
13. Flaxseed, its composition and properties, V. A. Zubtsov et al., 2002, UDC 633.521 + 612.392 / .398
14. Mendeleev D. I., Sokolov A. M. Kerosene // Encyclopedic Dictionary of Brockhaus and Efron: in 86 volumes (82 volumes and 4 additions). — St. Petersburg, 1890—1907.