Preservation of the Green Color and Flexibility by Glycerination and Artificial Pigment in Dried Leaves of Hedera and Camellia

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Abstract

The study was conducted to make the dried leaves of Hedera helix and Camellia japonica which can keep flexible and green color by glycerination and artificial pigment. To increase flexibility experimental materials was put into glycerin solution (glycerin: distilled water = 1:2, v/v). The flexibility of dried leaves could be increased by vacuum infiltration of the glycerin solution for 60 min in Hedra helix and for 80 min in Camellia japonica. But green color could not be maintained only by this treatment, so it was possible to keep green color by adding the green artificial pigment (Whajung), Hedera helix for 200 mL L^-1 and Camellia japonica for 500 mL L^-1. As a result, the dried leaves of Hedera helix and Camellia japonica could keep green color and flexibility by the mixed treatment of glycerin, artificial pigment and vacuum infiltration.

Keywords

artificial pigment; video microscope

References

Modern artificial colours tend to be more lightfast, more permanent, more intense and considerably cheaper and safer to use. It’s amazing how many of the older pigments (both natural and early synthetic variants) were highly toxic compounds containing lead, mercury, chrome, arsenic - even cyanide. Given the workaholic nature of many Old Masters and modern-era painters, one wonders how many of them were adversely affected by constant contact with such unhealthy chemical colourants. Celadon Green A variant of Green Earth pigment containing celadonite which gives it a greyish pale green colour. This pigment is chlorophyll, which is green. But leaves contain other pigments, and they are located in the chromoplasts. These pigments include xanthophylls (yellow), carotenoids (yellow, orange, red), and anthocyanins (red). Because of the significantly lower pigment intensity in the sample of the Mexican white oak that I believe was stressed in some way, I wondered if it would be possible to apply this technique of checking pigments in leaf samples as a way of checking the health of plants. Because the pigments work as accessory pigments that help absorb light, they are very important to the wellbeing of the plant. Is there a way to measure the exact amount of the pigments in the leaves? And is there a way to test for pigments without having to destroy them?