

Wandering Jew: *Tradescantia pallida*

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Wandering Jew is a shade loving plant grown for its purple leaves.



The cultivar (above) and similar ground cover plants (below).



The plants in the lower image are similar to wandering jew, shade loving, with similar colouring on the underside of otherwise green leaves. In both cases boiling water extracts Anthocyanins (purple dyes) and the green Chlorophylls are left untouched. To obtain a strong purple dye solution a handful of Wandering Jew leaves were placed in an electric jug, boiled for a minute or so, and left to cool.

The purple water was poured into three bottles and a squeeze of lemon juice was added to the central bottle.



The lemon juice changed the purple to pink.



Adding sodium hydroxide to the left-hand bottle and hydrochloric acid on the right gave a bright green and a strong pink. The colours are similar to the colours of Unchun and Sweet potato dyes in alkali and in acid.

The bottles were left undisturbed. After four hours the green colour had changed to a dull yellow and the purple and pink had faded a little.



A black precipitate had appeared in the left-hand bottle.

Adding acid to the left-hand bottle failed to change the colour to pink.

Adding the result (yellow acidified water) to the purple dye in the central bottle turned it pink.

Conclusion

The green indicator dye has degraded in the alkaline solution leaving a yellow dye that is not an indicator. The result is similar to what has been found for blue pea and sweet potato dyes. They are more stable over time in neutral and acidic solutions. All three indicators investigated to date must be made fresh each time before use.