

Carolina™ Solution Sheets
Aceto-Orcein

Learn how to make aceto-orcein solution and use it to stain chromosomes.

Materials

Distilled Water (item #858621)
Acetic Acid (item #841290)
Orcein (item #878471)
Stir Bar
Amber Bottle
Magnetic Stir Plate (item #701023)
Erlenmeyer Flask, 500-mL (item #731030)
Label
Boiling Chips (item #848280)

Don't want to make it yourself?
Find aceto-orcein solution at Carolina.com

Item Numbers
841453, 841451

Procedure

1. Boil 45 mL of 70% acetic acid.
2. Add 2 g of orcein.
3. Allow the solution to cool and dilute with 55 mL of distilled water.
4. Apply the stain to the desired slide and add the tissue.

Notes

- Aceto-orcein can be substituted with aceto-carmin in some techniques and the staining procedures are very similar.

Label Information

Aceto-Orcein, Laboratory Grade

Caution: Corrosive and toxic to body tissue

Date Prepared: _____

Initials of Preparer: _____

Health Risk: 3

Flammability: 1

Reactivity: 1

Applications

Orcein comes from 2 species of lichens: *Rocella tinctoria* and *Lecanora parella*. The natural form is preferable to the synthetic form because the natural form provides better contrast. It is a reddish-brown dye that has been used to observe chromosomes, elastic fibers, hepatitis B surface antigens, and copper-associated proteins.

Reference

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Fredenburgh, J. L., S. M. Edgerton, and A. E. Parker. 1978. A modification of the aldehyde fuchsin and orcein stains for hepatitis B surface antigen in tissue and a proposed chemical mechanism. *Journal of Histochemistry* 1:223–8.

Friedberg, S. H., and D. J. Goldstein. 1969. Thermodynamics of orcein staining of elastic fibres. *Histochemical Journal* 1:361–76.

Henwood, A. 2003. Current applications of orcein in histochemistry. A brief review with some new observations concerning influence of dye batch variation and aging of dye solutions on staining. *Biotechnic and Histochemistry* 78:303–8.

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