Corporate Headquarters
400 Valley Road
Warrington, PA 18976
1-800-523-2575
FAX 1-800-343-3291
Email: info@polysciences.com

Europe - Germany
Polysciences Europe GmbH
Handelsstr. 3
D-69214 Eppelheim, Germany
(49) 6221-765767
FAX (49) 6221-764620
Email: info@polysciences.de

Mowiol® 4-88

Description

Mowiol 4-88 is a high quality anti-fade medium used for immunofluorescence, as well as in many molecular biology applications. It is a solution of polyvinyl alcohol. Mowiol 4-88 hardens and has the same refractive index as immersion oil. If used for immunofluorescence applications, the addition of glycerol is recommended.

Procedure

These protocols are offered as guides. Specific situations may require one or more alterations to these protocols. Researchers are advised to optimize the use of Mowiol in any application.

Preparation of Mowiol

Note: It is important to keep stirring the mixture until the Mowiol is dissolved; otherwise, the Mowiol will settle out and trap the stir bar.

1. Add 4.8g Mowiol 4-88 and 12g glycerol to a 100ml beaker.
2. Mix well using a stir bar.
3. Add 12ml ddH_2O and continue stirring for several hours at room temperature.
4. Add 24ml 0.2 M Tris HCl (pH 8.5). Continue stirring. Heat occasionally to 50˚C in a water bath for approximately 10 minutes. Continue stirring until Mowiol is dissolved.
5. Once dissolved, centrifuge the solution at 500 x g for 15 minutes to clarify the solution.
6. Carefully remove the supernatant; store aliquots at -20˚C.

Preparation of Mowiol Coverslip Mounting Solution for Fluorescence Microscopy

Note: Do not use so much mounting solution that the coverslips are floating. Normally, 15-20µl is sufficient for a 22 x 22mm coverslip. 22 x 50mm coverslips require approximately 40-50µl. The addition of PPD (see below) is recommended to reduce bleaching of fluorescent probes.

1. Put 6g glyercol in a 50ml plastic centrifuge tube and add a small stir bar.
2. Add 2.4g Mowiol; stir to mix.
3. While stirring, add 6ml distilled water and leave for 2 hours at room temperature.
4. Add 12ml 0.2 M Tris (pH 8.5).
5. Optional: Add a small amount of NaN_3 (sodium azide) such that the final concentration is 0.02%.
6. Incubate the tube in hot water (50-60˚C) for 10 minutes to dissolve solids. This can be repeated over several hours, if necessary.
7. Centrifuge at 5000 x g for 15 minutes to remove any undissolved solids. Store 1ml aliquots in microcentrifuge tubes at -20˚C.
8. Warm tubes to room temperature for use. Opened tubes can be stored at 4˚C for approximately 1 month. Discard if any crystalline material is seen in the tube or on the slides.
9. Leave coverslipped slides in the dark overnight to harden before oil immersion lenses are used. This solution normally hardens overnight after slide preparation, and does not require the coverslips to be sealed with nail polish.

Preparation of a 0.1% Aqueous Solution of PPD

Note: PPD = p-phenylenediamine (1,4-Benzenediamine hydrochloride). This compound is carcinogenic and should be handled with care.

1. Aliquot and freeze in 1ml microcentrifuge tubes wrapped in aluminum foil.
2. To use, thaw and add 1 part PPD solution to 9 parts Mowiol.

3. Refreeze immediately after use.
4. Discard any solution that becomes discolored (pink/brown).

Preparation of Mowiol Mounting Medium
This solution is stable at -20˚C for up to 12 months. Once defrosted, it is stable at room temperature for at least one month.

1. Place 6g glycerol in a 50ml disposable conical centrifuge tube.
2. Add 2.4g Mowiol and stir thoroughly.
3. Add 6ml distilled H_2O and leave for 2 hours at room temperature.
4. Add 12ml 0.2 M Tris (pH 8.5) and incubate at approximately 53˚C until the Mowiol has dissolved. Stir occasionally.
5. Clarify by centrifugation at 4000-5000 rpm for 20 minutes.
6. Transfer the supernatant into glass vials with screw caps (approximately 1ml in each). Store at -20˚C.

References

1. **Harlow, E., D. Lane.** 1998. *Using antibodies: a laboratory manual.* Woodbury, New York: Cold Spring Harbor Press.
2. **Vanes, K., P. Brandt.** 1985. Retardation of immunofluorescence during microscopy. *J Histochem Cytochem,* 33:755-761.

Registered Trademarks

1. Mowiol® is a registered trademark of Kuraray Specialties Europe GmbH.

Storage and Stability

Store aliquots at -20˚C. Stable for up to twelve months. Once defrosted, opened tubes can be stored at room temperature for approximately one month.

Safety

This particle suspension contains sodium azide. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Upon disposal of material, flush with a large volume of water to prevent azide accumulation. Please consult the Material Safety Data Sheet for more information.

This product is for research use only and is not intended for use in humans or for *in vitro* diagnostic use.

Ordering Information

Cat. #	Description	Size
17951-500	Mowiol® 4-88	500g

To Order

In The U.S. Call: 1-800-523-2575 • 215-343-6484
In The U.S. FAX: 1-800-343-3291 • 215-343-0214

In Germany Call: (49) 6221-765767
In Germany FAX: (49) 6221-764620

Order online anytime at **www.polysciences.com.**

 Rev. #001, Active: 18/August/2008