

LSC in Practice

Solubilization of Hair

Problem

Difficulties performing the solubilization of hair prompted one researcher to contact our offices for assistance. This laboratory was using PerkinElmer's Soluene[®]-350 (PerkinElmer part number 6003038) to solubilize other materials and hoped that it could also be used for their new hair samples.

Discussion and Recommendation

The solubilization of hair with Soluene-350 is a well established sample preparation technique.

1. Add 1.0 mL of Soluene-350 to a maximum of 50 mg of hair.
2. Heat at 50 °C to 60 °C for one to three hours, or until all the hair is solubilized. (Human hair generally takes about 1 1/2 hours at 60 °C).
3. Cool to room temperature and add 100 µL of 30% (100 vol) hydrogen peroxide to remove the brown coloration from the solution. Swirl gently until the reaction subsides. Heat to 60 °C for 15 minutes to complete the reaction.
4. Cool to room temperature and add another 100 µL of 30% (100 vol) hydrogen peroxide. Swirl gently until the reaction subsides. Loosen cap, to prevent pressurization, then heat to 60 °C for 30 minutes to complete the reaction. After this treatment with hydrogen peroxide, the solution will be pale yellow/brown.
5. Cool to room temperature and add 10 mL to 15 mL of Hionic-Fluor™ (PerkinElmer part number 6013319).
6. Allow to stand in the scintillation counter for 30 minutes to temperature and light adapt before counting.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
Phone: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/lasoffices

©2007 PerkinElmer, Inc. All rights reserved. The PerkinElmer logo and design are registered trademarks of PerkinElmer, Inc. Hionic-Fluor is a trademark and Soluene is a registered trademark of PerkinElmer, Inc. or its subsidiaries, in the United States and other countries. All other trademarks not owned by PerkinElmer, Inc. or its subsidiaries that are depicted herein are the property of their respective owners. PerkinElmer reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.