



E. I. DU PONT DE NEMOURS & COMPANY
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WILMINGTON, DELAWARE 19898

CENTRAL RESEARCH & DEVELOPMENT DEPARTMENT
EXPERIMENTAL STATION

*Copy for Procedure Book
Horne*

January 28, 1976

Dr. Leonard A. Herzenberg
Department of Genetics
Stanford University
School of Medicine
Stanford, California 94305

Dear Dr. Herzenberg:

As requested during your telephone conversation with Royce Lockart, I have mailed to your laboratory approximately 1 pound of 66 nylon (type 200, 1.5 inch staple, 3.0 denier, semidull fiber) and 150 ml of Duponol[®] RA, a detergent used to scour the fiber. This nylon is the same type fiber which is sold to Ferwal Laboratories, Morton Grove, Illinois, and used in making LP-1 Leuko-Paks[®].

Nylon fiber is coated with antistatic agents (spin finishes) which are toxic to cells and therefore must be removed before attempting to attach cells to its surface. There are two procedures which can be used for this purpose.

Procedure 1: Soak the nylon fibers overnight in 0.1 N HCl at 37°C. (I have used approximately 100 ml 0.1 N HCl/gram of nylon.) Following the soak, rinse the fibers thoroughly with warm distilled H₂O and then dry the fibers in an oven at 60-80°C.

Procedure 2: To each 1 gram of nylon fiber, add 15 ml of 1% Duponol[®] RA (sodium alkyl ether sulfate) and place at 70-75°C for 20-30 minutes. The fibers are then washed for about 20 minutes in hot distilled H₂O, rinsed in cold distilled H₂O and dried in an oven to evaporate the moisture. When I used the

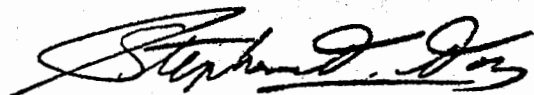
Duonol[®] scouring procedure, I rinsed the fibers with approximately 10 liters of H₂O and found no traces of Duonol[®]RA (analyzed for sulfate ion by X-ray photoelectron spectroscopy) on the fiber. You could probably use less water for your rinses than I have used.

Procedure 2 is the one Fenwal Laboratories probably uses since it is described in the patent proposal for the use of nylon fibers in removing granulocytes from whole blood. Du Pont fiber chemists generally suggest this method. However, I have used the first procedure which does as good a job as the Duonol[®] and also eliminates the possibility of residual Duonol[®] on the fiber which, in itself, is toxic to lymphocytes.

If I can be of further assistance to you and members of your laboratory, do not hesitate to contact me.

Give my regards to Bob Stout.

Sincerely,



Stephen T. Toy

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