

Cuprophane is in hemodialysis. Furthermore, Cuprophane costs four times as much as standard American cellophane. To obtain Cuprophane the patient must present the supplier with a prescription from his doctor stating that the material will be used in kidney machines. This is done because the supplier would be liable for any use which the patient desires to employ Cuprophane in without the issuance of a prescription.

For these reasons I cannot possibly see why there is a need for institutions to be required to distribute Cuprophane as presented in the Tariff Commission report on this bill.

(Dr. Sadler's prepared statement follows:)

STATEMENT OF JOHN H. SADLER, M.D., ASSISTANT PROFESSOR OF MEDICINE (RENAL DISEASE AND INORGANIC METABOLISM), DIRECTOR, ATLANTA ARTIFICIAL KIDNEY CENTER

Mr. Chairman, I am here to provide information regarding Cuprophane cellophane membrane for artificial kidneys and to urge your support for H.R. 13419, introduced by Congressman Ben B. Blackburn to remove the tariff from this product.

The material in question is produced by the Bemberg company of Wuppertal, Germany. It is imported into this country exclusively for use as artificial kidney (hemodialysis) membrane. Currently, a tariff of 23% is imposed on this material.

In the United States there are approximately 100 centers for chronic hemodialysis treatment. The number of patients sustained by these centers is approximately 2500. The goal of this treatment is not only survival but also rehabilitation. Because of this, many centers are training patients to take equipment and carry out this treatment at home. The greater freedom and convenience of this arrangement would recommend it, but the economy of hemodialysis demands that it be developed wherever possible.

For example, at the Atlanta Artificial Kidney Center, our cost per patient for each dialysis is \$110.00. Dialysis is required twice weekly, thus the annual cost is \$11,400.00. This is considered a comparatively economical center operation. On the other hand, our patients at home, after their initial purchase of hardware at approximately \$6,000.00, have an annual cost of about \$2,000.00. Of this, \$1,600.00 is for disposable materials. Cuprophane represents approximately \$160.00 per year. Other developments currently under way indicate a great likelihood of reducing the cost of disposable materials to \$1,200.00 per year. This would leave cuprophane as the highest cost single item among the disposables used in dialysis.

The membrane is critical to the operation of an artificial kidney. This device, called a dialyzer, passes blood through an envelope of cellophane immersed in a solution, the dialysate, which contains a normal concentration of necessary components of blood and none of the metabolic poisons which accumulate in the blood of people without kidney function. The abnormal products pass through into the dialysate, which is discarded. The ability of the membrane to pass these materials is critical to effective dialysis.

In our Center, using the Kluge dialyzer, tests have been carried out, not only on Cuprophane PT-150 membranes but also on DuPont PD-215 and DuPont PUD-0 cellophane. We found that there was a loss of approximately 30% dialyzer performance with the alteration from cuprophane to the PD-215, and a further loss of 10% in proceeding to the PUD-0 membranes. Indeed, untoward reactions in some of our patients caused DuPont to stop selling its membranes where they might be used for hemodialysis. Other centers, using Kiil dialyzers, found a 15-20% increase in transfer of water and larger molecules such as uric acid, when they changed from American Viscose cellophane to cuprophane membranes. So vital is the difference that dialysis would have to be prolonged by at least two hours per treatment if American cellophanes as now available had to be used.

The importer and supplier have promised to pass the reduction in cost directly to the users of cuprophane. The use of the material in medical centers and by patients on prescription only would eliminate any conceivable commercial competition. Cuprophane is three to four times more expensive than American cellophanes, and it is less durable. Thus, there seems to be no reason to wrap packages with it.