

Furthermore, Mr. Robert Collins provides us with additional information concerning the use of Cuprophane by institutions:

Because the Klung kidney uses more, smaller sized sheets, the savings would be greater. During the first 4 months of this year, we sold 31,500 Klung sheets. We project to sell on the order of 100,000 sheets for the next 12 months. The Atlanta Artificial Kidney Center uses 36 sheets of Cuprophane per dialysis for the Klung and 20 to 25 for the Mini Klung. We are estimating that there will be about 50 patients using these two kidneys during the next 12 months. (Both kidneys use the same size cut sheets.) This would indicate 175,000 sheets. Each patient uses about 3,500 sheets per year. The tariff savings would amount to approximately \$4 per 500 sheets or \$28 per year per patient for a total of \$1,400.

Combining the savings to the Kiil and Klung patients for the projected 12-month period, the total would be \$8,900. We are not in a position to speak of the projected savings for the Dialung or EMSCO Coil Kidney users. We feel that the \$8,900 savings is sufficient reason for pushing for the removal of the U.S. tariff on Cuprophane.

From the information that I have been able to gather, there is not any U.S. firm which is presently producing Cuprophane or a substance that could be used as a substitute for Cuprophane. FMCC Corp., American Viscose Division and DuPont have looked into the development of cellophanes to replace Cuprophane. However, to the best of my knowledge, no substance has been developed by these corporations.

For the information of my colleagues, I would like to insert the following items of correspondence from Dr. James H. Shinabarger, of the Los Angeles Veterans' Administration hospital.

In comparative studies, we have found that the DuPont Co.'s most suitable membranes for dialysis (PD 250 and PD 215) are only about 65 to 75 percent as permeable to urea as Cuprophane. Furthermore, we observed two very unfavorable reactions to PD 215 cellophane when used for dialysis which is in no way to be considered the fault or liability of the DuPont Co. In fact, representatives of the DuPont Co.'s film division were most generous and cooperative with us in performing these studies. They had indicated that should any of their standard membranes prove satisfactory for hemodialysis, they would make it available for this purpose at little or no cost. We deeply appreciate their attitude, but had to conclude that their membranes were not satisfactory for this purpose. The basic permeability of standard PT 150 Cuprophane (Bemberg, West Germany) is so high that no type of dialyzer (artificial kidney) yet developed is in itself efficient enough to fully utilize the full permeability of Cuprophane. This simple fact has made some of us wonder whether the cost of developing under research and contract grants new synthetic membranes for dialysis is really warranted until dialyzer design is advanced to the point of fully utilizing the permeability of the already available and very satisfactory Cuprophane.

We regret that no American cellulose membrane currently available is as suitable for dialysis as Cuprophane. We use Cuprophane because it reduces dialysis time 15-20 percent, and we feel that in order to make our patients' lives as nearly normal as possible, unnecessary prolongation of dialysis time must be avoided.

Recently, the report of the Tariff Commission was submitted to this committee. In this report, the Commission states there are three technical defects in my bill.

The first objection is concerning the section of the tariff schedule to be amended. I agree wholeheartedly, and desire that the committee make this change in my bill.

However, I must take issue to the other two proposed changes. The Tariff Commission states that Cuprophane is mainly a trade name. I would like to submit to the committee a statement by Mr. Charles Sheldon, acting chief, Science Policy Research Division, Legislative