AUTOMATED DIALYSATE SUPPLY AND MONITORING UNIT FOR HOME HAEMODIALYSIS*

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A console unit consisting of a twin proportioning pump device produces dialysate from a liquid concentrate of dialysate and mains water. The dialysate is brought up to 40 °C, by a booster heater and monitored by a temperature compensated conductivity meter, sensitive to 1% variation in total conductivity. Any deviation of dialysate outside predetermined levels, automatically inactivates the dialysate supply and sounds an alarm system simultaneously.

Fig. 1. Automated dialysate supply and monitoring unit for home haemodialysis. (Milton Roy Model)

Dialysis monitoring devices incorporated in the consol, permit the continuous measurement of vacuum pressure in the dialysate portion of the dialyser and the air pressure in the bubble trap on the return blood line from dialyser. Also, a visual flow meter indicates dialysate flow.

A spectro-photometer detects the presence of blood leaks into the dialysate. The whole system is self-sterilized automatically by heat of 90 °C. The unit has proven ideal for home haemodialysis functioning from mains water and single power point.