of 5 l by the CO_2 produced by the decomposition of 168 mg of $NaHCO_3$. In practice it will be found that about twice this quantity is necessary to maintain a pH of 7 in medium 199 for instance. Preliminary trials will determine the required amounts for the type of culture and medium used. This will then be extremely reproducible. The amount of H_3PO_4 is to be calculated so that there remains an excess after the reaction.

We have used this system regularly during the last year. 2 strains, HeLa cells and Chinese hamster fibroblasts, grow at least as efficiently as in closed bottles. Cells from mouse embryos and clones from bone marrow[2] are also very successfully cultured in these conditions.

Résumé. Du $NaHCO_3$ protégé par une enveloppe de cachet pharmaceutique ne commence à être décomposé par H_3PO_4 qu'après environ une minute. Cela permet de produire un taux déterminé de CO_2 dans l'atmosphère d'un récipient clos où sont placées les cultures de cellules (souches, embryonnaires, moëlle osseuse, etc.).

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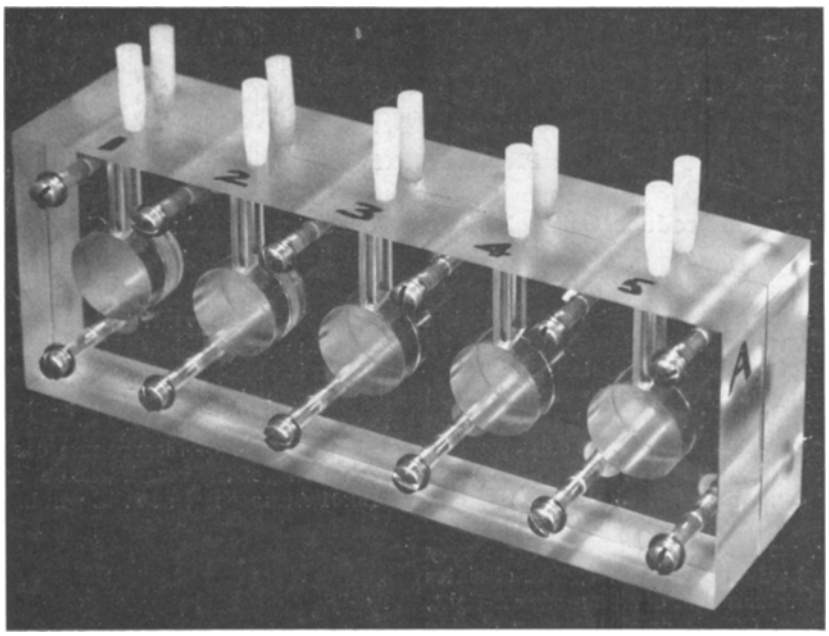
An Improved Device for Equilibrium Dialysis

The technique for equilibrium dialysis[1] is useful in studying the interactions between compounds of high molecular weight and small dialyzable chemical species. Several investigators[2,3] have employed this technique to measure the binding of inorganic ions with soluble protein.



The device shown in the Figure was fabricated from 2 pieces of $8 \times 3 \times 1$ inch plastic. Five 1 inch diameter wells were 'end-milled' into each piece to a depth of $^1/_2$ inch. The dialysis membrane was placed between the 2 pieces, and the device was assembled with 12 bolts and wing nuts.

Protein solution can be introduced to one side of the membrane through a $^3/_{16}$ inch diameter hole with a pipette. Solutions containing the dialyzable species can similarly be introduced to the other side of the membrane. The holes are closed with plastic plugs, and the device can be immersed in a constant temperature bath. Aliquots from each side of the membrane can be removed with a pipette for analysis.

The device shown in the Figure requires less material than required when conventional dialysis tubing is used and the entire system is much more compact. Equilibrium is established somewhat more slowly with this device than with conventional dialysis tubing because of the smaller area of the membrane. Radiotracer experiments show that 18 h is sufficient time to equilibrate mono-, di- or trivalent metal ions at concentrations up to 0.005 *M*.

Zusammenfassung. Ein einfaches Gerät für gewisse Dialyseprobleme wird beschrieben.

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