The amount of urine in the samples was carefully measured. The found average for the whole group was 1.066 cc. with a S.D. 1.42. The determinations of total nitrogen were

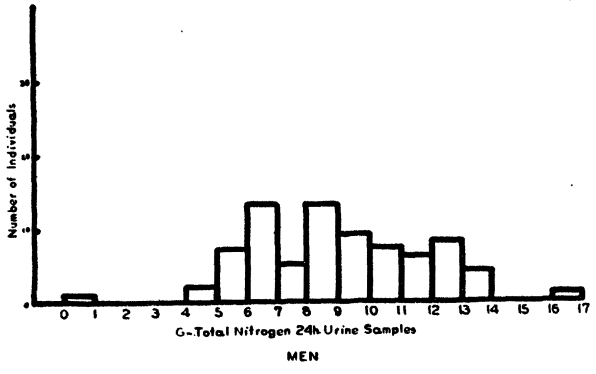

FIG. 3

made with the macro-Kjeldahl technique (*9*), using Gunning's modification (*8*). The determinations, carried out in duplicate in 80 per cent of the cases, checked well.

RESULTS

The histograms for the whole group, the female group, and the male group are shown in Figs. 1, 2, and 3, respectively.

In Fig. 1 the values are expressed in grams of nitrogen and in calculated metabolized proteins (N × 6.25). Table 1

TABLE 1

	No. Individuals	Averages (grams N/day)	S.D.	N × 6.25	Modes (grams N/day)
Whole group.....	194	8.03	2.80	50.2	6–7
Female.....	118	7.46	2.56	46.6	6–7
Male.....	76	8.89	2.74	55.6	6–9

shows the averages, standard deviations, calculated metabolized protein corresponding to the averages, and the modes of the distributions of the found values.

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Heterologous Transplantation of Human Tumors

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Two human tumors of the same type, both questionable lymphosarcomata or leukemias, were transplanted into mice after passage through tissue culture. One animal developed a tumor which metastasized to the liver and was identical to the human tumor. Another developed a similar tumor at the site of inoculation, but the cells infiltrated the adjacent breast tissue, initiating in it an adenocarcinoma which metastasized rapidly. Another mouse presents a leukemic picture with an absolute white count of 37,000. The suspected lability of these difficult-to-diagnose lymph-node tumors is thus experimentally demonstrated. Preliminary passage through tissue culture permitted transplantation of the human tumor to the animal without previous passage through the anterior chamber of the eye.

Inhibition of Heating and Lipolysis in Seeds

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Heating and deterioration of moist seeds has constituted a problem in those processing industries where seeds must be stored in bulk for extended periods of time. Damage resulting from heating is manifested not only by visible discoloration of the seeds but also by reduction of the quantity and quality of the processed products. For example, cottonseed which has been damaged by heating during storage will yield less oil than prime cottonseed, and the oil which is obtained will contain an increased percentage of free fatty acids.

Heating in seeds during commercial storage is minimized by one of the following procedures: (1) predrying prior to storage, (2) forced aeration during storage, or (3) stacking bagged seeds in a manner that provides natural circulation of air in the interspaces. Reduction or prevention of deterioration may also be effected by treating the seeds with chemicals to inhibit the biological processes which are responsible for heating and deterioration (*1, 3, 4, 5*). An investigation has been made to determine the effectiveness of a wide variety of chemicals as such inhibitors. Preliminary results of this survey are presented here, and detailed reports on the calorimetric method used and its application to problems of seed storage will appear elsewhere.

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