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RECORDS SERIES TITLE	Applied Science Division: Scientists' Papers - Papers of William E. Siri	
ACCESSION NO.	434-91-0131	COPY
FILE CODE NO.	19-14-18	
CARTON NO.	7	
FOLDER NAME	Dr. Leo Meyer (Marshall Island Natives)	
NOTES		
FOUND BY	Perry Hall	

404628

R

Dr. Meyers Subjects Recount

6/14/63

10 Min counts

Contents	Halo #	CPM	Ratio	Efficiency	Quench/Correction	CPM - B Kg	Corrected to 2 cc at 1/25 °C
A	A	10,100	0.75	14.97	2.67	10,069	26,688
B	B	6,666	0.76	15.01	2.66	6,635	17,449
C	39	6,086	0.75	14.97	2.67	6,055	16,167
D	40	8,015	0.73	14.00	2.86	7,984	22,834
E	41	5,968	0.74	14.94	2.68	5,937	15,911
F	42	7,825	0.75	14.97	2.67	7,794	20,810
G	43	6,508	0.74	14.94	2.68	6,477	17,358
H	44	6,134	0.75	14.97	2.67	6,103	16,295
I	45	8,622	0.74	14.94	2.68	8,591	23,024
J	46	7,812	0.74	14.94	2.68	7,781	20,853
K	47	8,556	0.74	"	"	8,525	22,847
L	48	6,555	0.74	"	"	6,524	17,484
M	49	10,078	0.74	"	"	10,047	26,926
N	50	9,638	0.75	14.97	2.67	9,607	25,651
O	51	11,535	0.74	14.94	2.68	11,504	30,831
P	52	9,283	0.75	14.97	2.67	9,252	24,703
Q	53	7,886	0.74	14.94	2.68	7,855	21,051
R	54	6,106	0.73	14.00	2.86	6,075	17,374
S	55	9,997	0.75	14.97	2.67	9,966	26,609
T	56	5,937	0.73	14.00	2.86	5,906	16,891
U	57	1,958	0.76	15.01	2.66	1,927	17,085
V	59	31	1.94	—	—	6,423	—
W	59	10,456	0.73	14.00	2.86	10,425	29,816

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1958
2/7
1923

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Counting water (H^3) distilled from urine by freeze drying. Channels Ratio

232 10,363 CPM — in 2^{cc} H_2O from distilled urine
 — 29 Bkg
 10,334 CPM Ratio 0.76 eff. 15.01

I brought all samples to the same efficiency and the unquench H^3 std is 40. For sample 232 this meant multiplying CPM by 2.66 = 27,428

My std was 2 cc of distilled H_2O containing $\frac{1}{25,000}$ of the dose the subjects took.

(Corrected for 4% efficiency difference)

$$\frac{\text{Std (CPM-Bkg)}}{\text{Sample (CPM-Bkg)}} = \frac{29,904}{27,428} = 1.088$$

X dilution factor of 25000 = 27200
 this is now Total Body Water in cc
 = 27,200 L.

L x 0.975 converts to kg H_2O = 26.792 kg

$$\% H_2O = \frac{\text{Kg } H_2O}{\text{Total body wt}} = \frac{26.792}{46.36} = 57.79\%$$

$$\% \text{ Fat in Human body} = 100 - \frac{\% H_2O}{0.72} = (100 - 80.26) = 19.74$$

wt of fat = % Fat x Bd. wt = 9.15

Lean Body wt = Total Body wt - Fat = 46.36 kg - 9.15 kg
 37.21 kg