CONTENTS

No. 1 JULY, 1939

C. M. McCay, L. A. Maynard, G. Sperling and LeRoy L. Barnes. Retarded growth, life span, ultimate body size and age changes in the albino rat after feeding diets restricted in calories. Four figures ................. 1

C. M. McCay, G. H. Ellis, LeRoy L. Barnes, C. A. H. Smith and Gladys Sperling. Chemical and pathological changes in aging and after retarded growth. Four figures ........................................ 15


H. S. Wilgus, Jr., and A. R. Patton. Factors affecting manganese utilization in the chicken ................................................................. 35

E. B. Forbes, Alex Black, Edward J. Thacker and R. W. Swift. The utilization of energy producing nutriment and protein as affected by the level of the intake of beef muscle protein. Four figures ................. 47


T. H. Jukes and T. D. Sanford. The vitamin D requirement of young turkeys. Two figures ................................................................. 71

J. B. Shields, H. H. Mitchell and W. A. Ruth. The effect of apple constituents on the retention by growing rats of lead contained in spray residues ................................................................. 87

Howard A. Schneider, J. Katherine Ascham, Blanche R. Platz and H. Steenbock. The anti-acrodynic properties of certain foods ................. 99

No. 2 AUGUST, 1939

Agnes Fay Morgan and Edna Gavin Haynes. Vitamin B content of human milk as affected by ingestion of thiamin chloride ................. 103

Margaret Lawrence, H. H. Mitchell and W. A. Ruth. The comparative toxicity of fluorine in calcium fluoride and in cryolite ................. 115

Margaret Lawrence, H. H. Mitchell and W. A. Ruth. A comparison of the toxicity of fluorine in the form of cryolite administered in water and in food ................................................................. 127
NATHAN W. SHOCK AND MAYO H. SOLEY. Average values for basal respiratory functions in adolescents and adults ........................................ 143
MOTT D. CANNON AND GLADYS A. EMERSON. Dietary requirements of the guinea pig with reference to the need for a special factor ........... 155
H. GOSS AND H. B. GUILBERT. The minimum vitamin A and carotene requirement of the rat ...................................................... 169
W. H. PETERSON AND C. A. ELVEHJEM. Conditions affecting the content of chick antidermatitis vitamin in yeast ........................ 181
BARNETT SURE. Influence of massive doses of vitamin B, on fertility and lactation ................................................................. 187
E. CHARLOTTE ROGERS. Basal metabolism of Connecticut State College students. Three figures .................................................. 195
AMERICAN INSTITUTE OF NUTRITION. List of Members .................. 205

No. 3 SEPTEMBER, 1939
WILLIAM W. PROUTY AND WILLIAM H. CATHCART. The calcium content of white bread ...................................................... 217
PAUL H. PHILLIPS AND B. W. ENGEL. Some histopathologic observations on chicks deficient in the chick antidermatitis factor or pantothenic acid. Four figures ...................................................... 227
E. F. KOHMAN. Oxalic acid in foods and its behavior and fate in the diet. Three figures ...................................................... 233
HARRY A. WAISMAN, OLAF MIKELSEN AND C. A. ELVEHJEM. The distribution of the chick antidermatitis factor (pantothenic acid) in meats and meat products .......................................................... 247
ALEXANDER B. GUTMAN AND MARGARET LOW. On the approximation of the calculated to determined calcium content of human dietaries ........ 257
GEORGE H. HITCHINGS AND Y. SUBBAROW. The rat growth factors of the filtrate fraction of liver extracts. One figure .......................... 265
BRIAN O'BRIEN AND KENNETH MORGAREIDGE. The effect of phosphorus on the biological estimation of vitamin D activity. Two figures .................. 277
J. O. HALVERSON, EARL H. HOSTETLER, J. E. FOSTER AND F. W. SHERWOOD. Soybean hay, alfalfa hay and yellow corn as vitamin A supplements in cottonseed meal rations for growing cattle ............................ 285
THORNT M. CARPENTER AND MORRIS STEGGERDA. The food of the present-day Navajo Indians of New Mexico and Arizona ..................... 297
RAYMOND W. SWIFT AND RICHARD M. FORBES. The heat production of the fasting rat in relation to the environmental temperature. Two figures ... 307
CONTENTS

No. 4 OCTOBER, 1939

HELEN S. MITCHELL, GLADYS M. COOK AND KATHERINE L. O'BRIEN. Effect of several calcium salts on the utilization of lactose. Two figures 319

R. W. ENGEL AND P. H. PHILLIPS. Fatty livers as a result of thiamin administration in vitamin B1 deficiency of the rat and the chick. Four figures 329

M. E. LOVELL AND I. M. RABINOWITCH. Factors influencing storage of protein with low-calorie diets. Two figures 339

ROBERT JOHN EVANS AND PAUL H. PHILLIPS. A new low fluorine diet and its effect upon the rat 353

GEORGE W. CRILE AND DANIEL P. QUIRING. Indian and Eskimo metabolisms 361

GEORGE W. CRILE AND DANIEL P. QUIRING. A study of the metabolism of the Maya Quiché Indian 369

HANS C. S. ABON. The relation of vitamin C deficiency to nutritional anemia. One figure 375

G. S. FRAPS AND E. C. CARLYLE. Utilization of energy of wheat products by chickens 385

JOHN HALDI, GEORGE BACHMANN, WINFREY WYNN AND CHARLES ENSOR. The effects produced by an increase in the calcium and phosphorus content of the diet on the calcium and phosphorus balance and on various bodily constituents of the rat 399

KENNETH MORGAREIDGE AND MARIAN LE FEVRE MANLY. Simultaneous appearance of a positive line test and radioactive phosphate deposition in the rachitic rat metaphysis. Four figures and one plate (five figures) 411

L. MARGARET JOHNSON, HELEN T. PARSONS AND HARRY STEENBOCK. The effect of heat and solvents on the nutritive value of soybean protein 423

No. 5 NOVEMBER, 1939

RALPH HOAGLAND AND GEORGE G. SNIDER. The synthesis of fat from protein by the albino rat 435

ALFRED GOERNER AND M. MARGARET GOERNER. The influence of a carcinogenic compound on the hepatic storage of vitamins 441

ALVIN L. MOXON AND KENNETH P. DUBOIS. The influence of arsenic and certain other elements on the toxicity of seleniferous grains. Three figures 447

LELA E. BOOHER AND ELIZABETH CROFTS CALLIS. The minimum vitamin A requirements of normal adults. II. The utilization of carotene as affected by certain dietary factors and variations in light exposure. One figure 459
CONTENTS

ROBERT C. LEE. Basal metabolism of the adult rabbit and prerequisites for its measurement. One figure ................................. 473

ROBERT C. LEE. Size and basal metabolism of the adult rabbit. Two figures 489

GLADYS A. EMERSON AND HERBERT M. EVANS. Restoration of fertility in successively older E-low female rats ........................................... 501

JAMES H. JONES. A comparison of cereal and non-cereal diets in the production of rickets ......................................................... 507

OLAF MICKELSEN, HARRY A. WAISMAN AND C. A. ELVEHJEM. The distribution of riboflavin in meat and meat products ............................ 517

B. CONNOR JOHNSON, C. A. ELVEHJEM, W. H. PETERSON AND H. J. FAGEN. The preservation of the ‘grass juice factor’ in silage. Four figures .... 527

No. 6 DECEMBER, 1939

ETHEL M. LUCE-CLAUSEN AND ELIZABETH F. BROWN. The use of isolated radiation in experiments with the rat. II. Effects of darkness, visible, and infra red radiation on three succeeding generations of rats. (a) Growth and storage of vitamin A. Three figures ...................... 537

ETHEL M. LUCE-CLAUSEN AND ELIZABETH F. BROWN. The use of isolated radiation in experiments with the rat. III. Effects of darkness, visible and infra red radiation on three succeeding generations of rats. (b) Reproduction. Six figures ........................................... 551

LUCIUS NICHOLLS AND ANANDA NIMALASURIYA. Adaptation to a low calcium intake in reference to the calcium requirements of a tropical population. One figure ......................................................... 563

J. C. BAUERNFEIND AND L. C. NORRIS. The role of the antidermatosis vitamin and a new water-soluble growth factor in the nutrition of the mature fowl ................................................................. 579

DANIEL MELNICK, HENRY FIELD, JR. AND WILLIAM D. ROBINSON. A quantitative chemical study of the urinary excretion of thiamine by normal individuals. Seven figures ........................................ 593

LOYD A. JONES AND CLIFTON TUTTLE. The isolation of desired qualities of radiant energy for biological experimentation. Six figures .......... 611

WARREN W. WOESSNER, C. A. ELVEHJEM AND HENRY A. SCHUETTE. The determination of ascorbic acid in commercial milks .......................... 619

MEAD JOHNSON & COMPANY ‘B-COMPLEX’ AWARD ......................... 627