content is determined by a periodate-chromotropic acid method of analysis for glycerol (5). Standard solutions of triglyceride, triolein/tripalmitin (2:1 w/w), containing 25, 50, and 75 μg are subjected to the entire procedure with each run. Recoveries of these standards have averaged 96%. Results of analyses of serum samples by the thin-layer procedure and a modified Carlson (5) procedure are given in Table I. The triglyceride levels obtained by the thin-layer procedure averaged 19% lower than those found by the modified Carlson (5) method. Experiments with model compounds showed that the modified Carlson (5) procedure determines total glycerides. Further experiments are in progress to determine whether the lower values obtained by the thin-layer procedure are due to the specificity of this method for triglyceride.

VIRGINIA S. WHITNER
O. T. GRIER
ANTOINETTE N. MANN
R. F. WITTER
U.S. Public Health Service
Communicable Disease Center
Heart Disease Control Unit
Lipid Standardization Laboratory
Atlanta, Georgia

REFERENCES

1. Marinetti, G. V., and E. Stotz, Biochim. Biophys. Acta *37*, 571, (1960).
2. Vogel, W. C., and L. Zieve, J. Lipid Res. *5*, 177 (1964).
3. Mangold, H. K., JAOCS *38*, 708 (1961).
4. Rouser, G., C. Galli, E. Lieber, M. L. Blank and O. S. Privett, JAOCS *41*, 836 (1964).
5. Carlson, L. A., J. Atheroscler. Res. *3*, 334 (1963).
6. Abell, L. L., B. B. Levy, B. B. Brodie and F. E. Kendall, J. Biol. Chem. *1*, 357 (1952).

[Received July 26, 1965—Accepted October 5, 1965]

Dietary Myristate and Plasma Cholesterol Concentration

IN A RECENT COMMUNICATION Hegsted et al. (1) reported that the elevated serum cholesterol concentration effected by dietary saturated fats is due mainly to their myristic acid content. Also, it has been found by us that the ingestion by pigs of a triglyceride made up of myristic and lauric acids resulted in elevated incorporation of labeled acetate into liver and plasma cholesterol and bile sterols (2).

During a study in this laboratory in which the cholesterogenic and lipogenic responses to a series of simple triglycerides were determined (3), the plasma cholesterol concentrations were assayed but not reported. Previously unpublished data from that study (Table I) are herein presented in support of the observations (1,2) of the outstanding effects of myristic acid. The high plasma cholesterol response to dietary trimyristin is manifest.

The details of the experiment were given in the original publication (3). In brief the simple triglycerides were fed for two weeks to 200 g male rats as 10% or 30% of a semisynthetic diet, and plasma cholesterol assays were made (4).

TABLE I

Cholesterol concentration in blood plasma of 200 gram rats fed various fats as 30% or 10% of their diets for two weeks

Diet	Plasma Cholesterol	Diet	Plasma Cholesterol
	mg/100 ml		mg/100 ml
Basal	99	30% Trimyristin	158
	99		122
	112		129
	103		177
Average	103	Average	149
30% Tributyrin	75	30% Tripalmitin	86
	70		97
	73		90
	73		117
Average	73	Average	98
30% Tricaprylin	105	10% Triolein	112
	102		102
	105		112
	108		
Average	105	Average	109
30% Tricaproin	89	30% Trilinolein	120
	80		112
	85		93
	89		81
	89	Average	102
Average	86	30% Palmitoyl-olein	129
30% Tricaprin	93		138
	89	(1:2 mole ratio)	141
	96		116
	95		118
Average	93	Average	120
10% Trilaurin	96	10% Safflower oil	134
	116		112
	118		129
Average	110	Average	125

RAYMOND REISER
MARY CARR WILLIAMS
MARY FRANCES SORRELS
N. L. MURTY
Deparment of Biochemistry & Nutrition
Texas A&M University
College Station, Texas

ACKNOWLEDGMENT

Supported by a contract (AF 41(657)-251) with the School of Aerospace Medicine, U.S. Air Force, and grants from the Robert A. Welch Foundation and the National Institutes of Health (AM-06011).

REFERENCES

1. Hegsted, D. M., R. B. McGandy, M. L. Myers and F. J. Stare, Federation Proc. *24*, 262 (1965).
2. Reiser, R., M. F. Sorrels and M. C. Williams, Circulation Res. *6*, 833 (1959).
3. Reiser, R., M. C. Williams, M. F. Sorrels and N. L. Murty, Arch. Biochem. Biophys. *102*, 276 (1963).
4. Zak, B., N. Moss, A. J. Boyle and A. Zlatkis, Anal. Chem. *26*, 777 (1954).

[Received September 3, 1965—Accepted October 5, 1965]

• *Addendum*

JAOCS *42*, 775, 1965, R. J. VanderWal: "Semiquantitative Structural Analysis of Fats by Thin-Layer Chromatography of the Allyl Esters of the Products of vonRudloff Oxidation."

In section II, Paragraph 3, a small but important step was omitted. After the volume is reduced, and prior to extraction with chloroform, the mixture is acidified by addition of 1 ml of concentrated hydrochloric acid in 4 mil of water.