

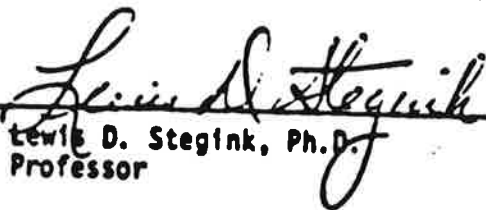
G-79-002  
(E-111)

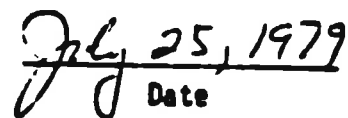
METABOLIC STUDIES OF ASPARTAME AND MONOSODIUM GLUTAMATE WHEN INGESTED  
TOGETHER AS PART OF A SOUP--BEVERAGE MEAL

July 25, 1979

Report To:  
G. D. Searle  
Skokie, Illinois

From:  
Lewis D. Stegink, Ph.D.  
L. J. Filer, Jr., M.D., Ph. D.  
George L. Baker, M. D.  
The University of Iowa College of Medicine  
Iowa City, Iowa 52242

  
Lewis D. Stegink, Ph.D.  
Professor

  
Date

## Introduction

Over the past several years we have generated considerable information on the metabolism of aspartame when administered either in juice (1-5) or with a meal (6). The doses of aspartame studied ranged from the projected 99.9th percentile ingestion level (34 mg/kg), to potential abuse doses (200 mg/kg body weight). These studies demonstrated that plasma phenylalanine concentrations show a dose-related response to aspartame loading. Plasma concentrations of aspartate show a threshold rather than a dose response. Plasma aspartate values did not increase until aspartame doses reached 100 mg/kg body weight.

The metabolism of glutamate and aspartate is interrelated. Thus, whenever aspartame is introduced into a food system, its metabolism must be considered along with that of monosodium glutamate (MSG) present in the food supply. Glutamate loads produce a rise in plasma concentrations of aspartate as well as glutamate (7-9). Conversely, high doses of aspartame produce a slight rise in plasma glutamate concentrations (1, 3). Because of this interaction, it has been suggested that the metabolism of these two compounds might be decreased when ingested together, with resultant elevations in plasma glutamate and aspartate levels and an increase in potential for neurotoxicity (10-12).

We have previously studied the interaction of aspartame and MSG when ingested in a meal system. In these studies (3, 6), plasma amino acid levels were measured in normal adult volunteers ingesting a hamburger--milk shake meal providing 1 gm of protein/kg body weight, with and without added MSG and aspartame. Three meal systems were studied: a) the meal alone; b) the meal plus MSG at a level of 34 mg/kg body weight; and c) the meal plus MSG at 34

mg/kg and aspartame at 34 mg/kg body weight. These experiments demonstrated that the addition of MSG and aspartame to a high protein meal did not increase plasma glutamate or aspartate levels above those produced by the meal itself. No evidence was found for a rapid early rise in plasma glutamate or aspartate levels (3, 6).

Since that experiment, we have carried out additional studies on the interaction of MSG with meal components (13, 14). These studies suggest that glutamate metabolism is greatly facilitated when MSG was ingested with a meal, compared to ingestion with water. Plasma glutamate levels did not exceed average postprandial values (4 to 12 umoles/dl) when MSG was ingested at the WHO Advisable Daily Intake (150 mg/kg) with a meal. However, when an equivalent dose of MSG was administered in water, plasma glutamate levels increased dramatically, peaking at 75 umoles/dl. These studies demonstrated that the carbohydrate portion of the meal was the component that facilitated glutamate metabolism, presumably by increasing the amount of pyruvate available to the intestinal mucosa. On the basis of these observations, it could be predicted that the interaction of MSG and aspartame would be greatest when carbohydrate was not present in the meal.

Aspartame is designed to replace sucrose in the diet. It is particularly likely to do so in the diet of weight-conscious Americans, individuals prone to having a soup-beverage lunch. Some soups contain up to 0.72 percent MSG (15). Adult subjects ingesting these soups might ingest 10 to 20 mg of MSG/kg body weight. If an aspartame sweetened beverage is ingested with the soup, the dicarboxylic amino acid load will increase. This may result in higher plasma glutamate and aspartate levels than if the soup was ingested alone.

To investigate this question, MSG--aspartame interactions were studied in 9 normal adult volunteers ingesting soup--Kool-Aid meals with and without added MSG, with and without added aspartame. Plasma amino acid levels were measured with time to determine if the addition of aspartame to the meal increased plasma glutamate and aspartate levels above levels noted when the meal was ingested with aspartame. The three soup--beverage meal systems were:

- A. Soup (no added MSG) with unsweetened beverage
- B. Soup (with 50 mg/kg MSG) with unsweetened beverage
- C. Soup (with 50 mg/kg MSG) with sweetened beverage (34 mg aspartame/kg body weight).

#### Materials and Methods

Nine normal healthy adult subjects were studied, 6 male and 3 female. The proposed study was fully explained to each subject and informed, written consent obtained. The protocol of the study was reviewed and approved by the Committee on Research Involving Human Subjects of the University of Iowa. The subjects were screened 1 week prior to entry into the study. This included a physical examination, complete blood count, urinalysis, a pregnancy test (female subjects), SMA 6/60, SMA 12/60 (serum: total protein, albumin, calcium, inorganic phosphorous, cholesterol, glucose, urea nitrogen, uric acid, alkaline phosphatase, lactate dehydrogenase, total bilirubin, glutamate-oxaloacetate transaminase, sodium, potassium, chloride, carbon dioxide and creatinine) and fasting plasma amino acid analyses. All subjects were requested to refrain from the ingestion of alcohol 24 hours prior to and 24 hours after administration of the test compounds.

The nine subjects were studied in a Latin Square Design (16) using 3 different soup--beverage meals. Entry into the study was randomized for each sex so that 2 males and 1 female entered each cell of the study. A one week



interval separated individual studies. Each meal consisted of beef consomme soup administered at 4.2 ml/kg body weight and Kool-Aid provided at 3.3 ml/kg body weight, however they varied in amount of MSG and aspartame.

The soup-beverage meal was administered at 0800 hours following an overnight fast. The subjects received nothing by mouth for 4 hours following this load. Heparinized blood samples for plasma amino acid analyses were obtained at 0, 15, 30, 45, 60, 90, 120, 150, 180 and 240 minutes after ingestion of the meal. Blood samples were immediately centrifuged to separate plasma and erythrocytes, and the plasma was prepared for analyses as described previously (2). Amino acid analyses were carried out on automated amino acid analyzers (Beckman 121 M, Beckman Instruments, Palo Alto, California).

The Beef Consomme Soup Mix (no added MSG) was obtained from the laboratories of the Ajinomoto Company, Inc., Tokyo, Japan. Its composition is shown in Table 1. Unsweetened cherry-flavored Kool-Aid (General Foods Corp., White Plains, N. Y.) was purchased from a local grocery store and prepared according to package instructions. The monosodium-L-glutamate was purchased as Accent from a local grocery store. The aspartame was obtained from G. D. Searle, Skokie, Illinois.

### Results

The detailed plasma amino acid values for each subject for each dose level are found in Appendix I. Clinical data are found in Appendix 2. The most important aspects of the amino acid data are discussed below.

Table 2 shows plasma glutamate levels for all subjects. As expected, plasma glutamate levels remained essentially unchanged after ingestion of the soup--beverage meal without added MSG or aspartame. However, plasma glutamate levels increased rapidly after ingestion of the soup--beverage meal providing MSG, reaching a mean ( $\pm$  S.D.) peak value of  $18.8 \pm 6.77$  umoles/dl at 30 minutes,

and returning to baseline values by 120 to 150 minutes after ingestion of the load. The addition of aspartame to the meal did not significantly increase plasma glutamate levels. Plasma glutamate values peaked at  $21.0 \pm 8.68$  umoles/dl at 30 minutes, and returned to baseline values 90 to 150 minutes after ingestion of the load. As noted in our previous studies of glutamate (14), several subjects consistently metabolized added free glutamate very rapidly. In such individuals, plasma glutamate increased only slightly over baseline values. The mean peak plasma glutamate value obtained from this study fits nicely onto the dose-response curve previously calculated (Figure 1).

Plasma aspartate levels for these subjects are shown in Table 3. Plasma aspartate levels were essentially unchanged after ingestion of the soup--beverage meal without added MSG or aspartame. The addition of MSG (50 mg/kg) to the meal caused a significant increase in plasma aspartate values, with values increasing from a fasting mean ( $\pm$  S.D.) of  $0.66 \pm 0.54$  umoles/dl to a mean peak value of  $2.20 \pm 0.81$  umoles/dl, 15 to 30 minutes after loading. Plasma aspartate values decreased rapidly thereafter, reaching baseline levels 120 minutes after loading. The addition of aspartame and MSG to the soup--beverage meal resulted in a small, but significant ( $p = 0.01$ , paired t test) increase in plasma aspartate level, above values noted from MSG alone. Mean ( $\pm$  S.D.) peak values reached  $4.90 \pm 2.89$  umoles/dl at 30 minutes. Aspartate values rapidly returned to baseline 150 minutes after aspartame ingestion.

Plasma phenylalanine levels (Table 4) remained essentially unchanged after ingestion of the soup--beverage meal without MSG and aspartame, and the meal, which provided MSG at 50 mg/kg body weight. As expected, plasma phenylalanine levels increased significantly over baseline values after ingestion of the meal providing MSG and aspartame. Plasma phenylalanine levels reached a mean ( $\pm$  S.D.)

peak level of  $13.3 \pm 4.96$  umoles/dl 30 minutes following ingestion of the meal, returning to baseline by 4 hours. The phenylalanine levels noted in these subjects were similar to those noted in normal individuals ingesting aspartame (34 mg/kg) in orange juice (2).

Plasma tyrosine levels (Table 5) showed no change from baseline values after ingestion of the meal alone, or the meal with added MSG. Plasma tyrosine levels increased significantly over baseline after the meal providing MSG and aspartame, reflecting the conversion of phenylalanine to tyrosine. Peak values reached  $7.93 \pm 1.33$  and  $8.15 \pm 1.76$  umoles/dl 45 to 60 minutes after ingestion of the meal. Tyrosine levels returned to baseline levels four hours after ingestion of the meal.

Plasma alanine levels are shown in Table 6. Plasma levels were essentially unchanged after ingestion of the soup--beverage meal containing no added MSG or aspartame. The addition of MSG to the soup--beverage meal did not result in increased plasma alanine levels. However, ingestion of both MSG and aspartame increased plasma alanine levels from fasting levels of  $36.2 \pm 6.67$  umoles/100 ml to values of  $45.0 \pm 12.7$  umoles/100 ml 60 minutes after loading. Plasma alanine levels then rapidly returned to baseline values. Increased plasma alanine levels were also noted in subjects receiving an equivalent dose of aspartame administered in orange juice (2). This presumably reflects the rapid metabolism of the aspartate portion of aspartame.

#### Discussion

The quantity of MSG and aspartame administered in this study is considerable. According to the Committee on GRAS List Survey--Phase II (17) mean daily intake of MSG approximates 100 to 225 mg for persons two years of age and over. These survey data (Table 7) indicate that the expected mean daily intake of MSG is

6.8 mg/kg body weight for the age group ingesting the largest quantity of MSG (12-23 months of age). This survey indicates a daily intake of 30 mg/kg body weight at the 90th percentile and an intake of 61 mg/kg at the 99.9th percentile for this age group. If we assume that all this MSG is ingested over the course of 3 meals, an individual at the 99.9th percentile would ingest approximately 20 mg of added MSG per meal.

A recent review by Consumer Reports (15) listed the MSG content of commercially available soups. This report indicates an average level of 735 mg MSG per serving, with serving sizes ranging from 6 to 15 oz. A 70 kg adult ingesting an average serving could receive a dose of 10.5 mg/kg body weight of MSG, a 26 kg child a dose of 28 mg/kg body weight, and a 15 kg child 49 mg/kg body weight. We elected to study soup providing MSG at 50 mg/kg body weight to test the largest potential dose.

The quantity of aspartame added to the meal system was considerably greater than expected use level per meal, since we wished to maximize our ability to observe an effect of aspartame upon glutamate metabolism. For example, the usual soft-drink contains about 10 percent sucrose (w/v). A 12 oz bottle of such a beverage would provide about 36 gm of sucrose, equivalent to 200 mg aspartame using a sweetening factor of aspartame to sucrose of 180:1. A 70 kg adult ingesting 12 oz of this beverage would ingest 2.9 mg/kg body weight aspartame, a 26 kg child 7.7 mg/kg body weight and a 15 kg child 13.3 mg/kg body weight. The aspartame dose used in our studies (34 mg/kg) represents the 99.9th percentile of projected aspartame ingestion (2). This would be equivalent to the two-year-old child drinking three 12 oz bottles of soft drink in a single setting, alone with a 6 to 15 oz serving of soup.

Olney (10, 11) and Reif-Lehrer (12) have expressed concern that the aspartate content of aspartame might interact with MSG already present in the food system. Their concern was that such interaction would result in a reduced metabolism of glutamate and aspartate, markedly increasing plasma levels of these amino acids beyond those observed with glutamate alone. They associated these hypothetically increased plasma levels of glutamate and aspartate with increased potential for adverse effects. They based their concerns on the findings that large glutamate and aspartate loads given to infant mice produce similar neuronal necrosis, and that the effect of the glutamate and aspartate given together appeared to be additive (18).

However, the data from our previous study of interactions of aspartame and MSG ingested as part of a hamburger--milk shake meal (3, 6), and the data from the present study do not support the concept that aspartame ingestion with MSG will increase plasma glutamate plus aspartate levels at the levels studied.

In the present study, the ingestion of soup providing MSG at 50 mg/kg body weight increased plasma glutamate levels from normal fasting values ( $3.89 \pm 1.31$  umoles/dl) to a mean ( $\pm$  S.D.) peak value of  $18.8 \pm 6.77$  umoles/dl 30 minutes after ingestion. The maximum value for plasma glutamate noted in one subject was 29.5 umoles/dl. Plasma aspartate values also increased, peaking at  $2.2 \pm 0.81$  umoles/dl 30 minutes after ingestion, with a maximal level in one subject of 3.43 umoles/dl. The mean peak combined glutamate plus aspartate level (Table 8) was  $21.0 \pm 7.14$  umoles/dl, with a maximal level in one subject of 32.9 umoles/dl. Despite the large quantity of aspartame administered, its addition to the soup--beverage meal containing MSG resulted in only a small increase in plasma glutamate plus aspartate levels. Mean peak glutamate plus aspartate levels were  $25.7 \pm 10.5$  umoles/dl, a value not significantly greater than values noted

after ingestion of the meal with glutamate alone ( $21.0 \pm 7.14$  umoles/dl). Maximal glutamate plus aspartate levels in one subject was 39.6 umoles/dl.

These data indicate that the addition of large quantities of aspartame to food systems already containing a large quantity of MSG have only a minimal effect upon plasma glutamate and aspartate concentrations.

The data from the present study agree well with our previous data which also showed a lack of aspartame effect upon MSG metabolism when administered as part of a hamburger--milk shake meal (3, 6). Furthermore, the present study was carried out under conditions which should show maximal interaction between aspartame and MSG. In prior studies (13, 14) we have shown that MSG metabolism is slowest whenever the meal provides little carbohydrate, since glucose appears to facilitate glutamate metabolism in the intestinal mucosa. Thus, ingestion of MSG in a clear soup with an aspartame-sweetened beverage represents the condition most likely to show an effect of aspartame upon glutamate metabolism. These data indicate that the addition of 34 mg/kg aspartame (the 99.9th percentile of projected daily ingestion) to a soup providing 50 mg/kg of MSG had only a small effect upon total plasma glutamate plus aspartate levels. Thus, the addition of aspartame to the food supply will not significantly increase plasma glutamate plus aspartate levels above levels that would result from ingestion of the glutamate alone.

The potential toxicity of grossly elevated plasma glutamate and aspartate levels is controversial. There is no doubt that administration of large doses of aspartate and glutamate to the young rodent produces markedly elevated plasma levels of these amino acids (19, 20), and hypothalamic neuronal necrosis (21, 22). The results of studies in the neonatal non-human primate differ. Olney and colleagues report that high doses of glutamate given to neonatal non-human

primates cause neuronal necrosis (23, 24). However, four other laboratories have been unable to repeat these findings (25-30) even in the presence of grossly elevated plasma glutamate plus aspartate levels. For example, we were unable to detect neuronal necrosis in infant monkeys given large doses of MSG, where plasma glutamate plus aspartate levels exceeded 500 umoles/dl (30).

In addition, Reynolds et al. (31) have demonstrated that aspartame administered at 2 gm/kg body weight to neonatal primates does not result in neuronal damage. Furthermore, they have also demonstrated that administration of aspartame at 2 gm/kg body weight with MSG at 1 gm/kg body weight does not produce neuronal necrosis in infant non-human primates (32). Thus, the concerns of Olney (10, 11) and Reif-Lehrer (12) seem to be without scientific foundation.

The rapid metabolism of ingested glutamate and aspartate is not surprising. Windmueller and Spaeth reported very rapid metabolism of glutamate and aspartate by the intestine in vivo (33, 34). Furthermore, dietary protein contains large quantities of aspartate and glutamate which are readily metabolized (35).

The increase in plasma phenylalanine levels noted in subjects ingesting the soup--beverage meal with added aspartame were similar to those noted in our previous studies of aspartame (2), where equivalent doses were administered in orange juice. The peak plasma phenylalanine levels observed ( $13.3 \pm 4.96$  umoles/dl) are well within the normal postprandial range noted in normal orally-fed human infant and adult subjects (36, 37).

# References

1. Stegink, L. D., Filer, L. J., Jr. and Baker, G. L. (1977) Effect of aspartame loading upon plasma and erythrocyte free amino acid levels in normal adult subjects. Report to G. D. Searle, Jan. 19, 1977.
2. Stegink, L. D., Filer, L. J., Jr. and Baker, G. L. (1977) Effect of aspartame and aspartate upon plasma and erythrocyte free amino acid levels in normal adult volunteers. J. Nutr. 107, 1837-1845.
3. Stegink, L. D., Filer, L. J., Jr., Baker, G. L., Brummel, M. C. and Tephly, T. R. (1978) Aspartame metabolism in human subjects. IN: Health and Sugar Substitutes, B. Guggenheim, editor, Krager, Basel, pp. 160-165.
4. Stegink, L. D., Filer, L. J., Baker, G. L., McDonnell, J. E. (1979) Effect of aspartame loading upon plasma and erythrocyte levels of amino acids in phenylketonuric heterozygotes. J. Nutr. 109, 708-711.
5. Stegink, L. D., Filer, L. J., Jr. and Baker, G. L. (1979) Plasma, erythrocyte and human milk levels of free amino acids in lactating women administered aspartame or lactose. J. Nutr., in press.
6. Baker, G. L., Filer, L. J., Jr. and Stegink, L. D. (1977) Plasma and erythrocyte amino acid levels in normal adults fed high protein meals: Effect of monosodium glutamate or monosodium glutamate plus aspartame. Federation Proceed. 36, 1154.
7. Stegink, L. D., Filer, L. J., Jr. and Baker, G. L. (1972) Monosodium glutamate: Effect on plasma and breast milk amino acid levels in lactating women. Proc. Soc. Expt. Biol. Med. 140, 836-841.
8. Stegink, L. D., Filer, L. J., Jr. and Baker, G. L. (1973) Monosodium glutamate metabolism in the neonatal pig. Effect of load upon plasma, brain, muscle and spinal fluid free amino acid levels. J. Nutr. 103, 1135-1145.



9. Stegink, L. D., Reynolds, W. A., Filer, L. J., Jr., Pitkin, R. M., Boaz, D. P. and Brummel, M. C. (1975) Monosodium glutamate metabolism in the neonatal monkey. *Am. J. Physiol.* 229, 246-250.
10. Olney, J. W. (1975) L-glutamic and L-aspartic acids--a question of hazard? *Food Cosmet. Toxicol.* 13, 595-596.
11. Olney, J. W. (1975) Another view of Aspartame. IN: *Sweeteners, issues and Uncertainties*, Academy Forum, National Academy of Sciences, Washington D. C., pp. 189-195.
12. Reif-Lehrer (1976) Possible significance of adverse reactions to glutamate in humans. *Federation Proceed.* 35, 2205-2211.
13. Baker, G. L., Filer, L. J., Jr. and Stegink, L. D. (1979) Effect of carbohydrate on glutamate metabolism. *Federation Proceed.* 38, 610.
14. Stegink, L. D., Filer, L. J., Jr., Baker, G. L., Mueller, S. M. and Wu-Rideout, M. Y-C. (1979) Factors affecting plasma glutamate levels in normal adult subjects. IN: *Glutamic Acid: Advances In Biochemistry and Physiology*, edited by L. J. Filer, Jr., S. Garattini, M. R. Kare, W. A. Reynolds and R. J. Wurtman, Raven Press, New York, pp. 333-351.
15. Dried Soup Mixes (This is soup?). *Consumer Reports*, November, 1978, pp. 615-619.
16. Cochran, W. G. and Cox, G. M. (1950) *Experimental Design*, John Wiley and Sons, New York, p. 86.
17. Appendix E, Estimating Distributions of Daily Intake of Monosodium Glutamate (MSG). IN: *Estimating Distribution of Daily Intake of Certain GRAS Substances*. Committee on GRAS List Survey--Phase III, Food and Nutrition Board, Division of Biological Sciences, Assembly of Life Sciences, National Research Council, National Academy of Sciences, Washington, D. C., December, 1976.
18. Olney, J. W. & Ho, O-L. (1970) Brain damage in infant mice following oral intake of glutamate, aspartate or cysteine. *Nature* 227, 609-610.

19. Stegink, L. D., Shepherd, J. A., Brummel, M. C. and Murray, L. M. (1974) Toxicity of protein hydrolysate solutions. Correlation of glutamate dose and neuronal necrosis to plasma amino acid levels in young mice. *Toxicology* 2, 285.
20. Perez, V. J. and Olney, J. W. (1972) Accumulation of glutamic acid in the arcuate nucleus of the hypothalamus of the infant mouse following subcutaneous administration of monosodium glutamate. *J. Neurochem.* 19, 1777.
21. Olney, J. W. (1969) Brain lesions, obesity and other disturbances in mice treated with monosodium glutamate. *Science* 164, 719.
22. Lemkey-Johnston, N. and Reynolds, W. A. (1974) Nature and extent of brain lesions in mice related to ingestion of monosodium glutamate. *J. Neuropath. Exp. Neurol.* 33, 74.
23. Olney, J. W. and Sharpe, L. G. (1969) Brain lesions in infant rhesus monkeys treated with monosodium glutamate. *Science* 166, 386.
24. Olney, J. W., Sharpe, L. G. and Feigin, R. D. (1972) Glutamate-induced brain damage in infant primates. *J. Neuropathol. Exptl. Neurol.* 31, 464.
25. Reynolds, W. A., Lemkey-Johnston, N., Filer, L. J., Jr. and Pitkin, R. M. (1971) Monosodium glutamate: absence of hypothalamic lesions after ingestion by newborn primates. *Science* 172, 1342.
26. Abraham, R. W., Dougherty, W., Golberg, L. and Coulston, F. (1971) The response of the hypothalamus to high doses of monosodium glutamate in mice and monkeys. Cytochemistry and ultrastructural study of lysosomal changes. *Exptl. Mol. Path.* 15, 43.

27. Newman, A. J., Heywood, R., Plamer, A. K., Barry, D. H., Edwards, F. P. and Worden, A. N. (1973) The administration of monosodium-L-glutamate to neonatal and pregnant primates. *Toxicology* 1, 197.
28. Wen, C., Hayes, K. C. and Gershoff, S. M. (1973) Effects of dietary supplementation of monosodium glutamate on infant monkeys, weanling rats and suckling mice. *Am. J. Clin. Nutr.* 26, 803.
29. Abraham, R., Swart, J., Golberg, L. and Coulston, F. (1975) Electron microscopic observations of hypothalamic in neonatal rhesus monkeys (Macaca mulatta) after administration of monosodium-L-glutamate. *Exptl. Mol. Path.* 23, 203.
30. Stegink, L. D., Reynolds, W. A., Filer, L. J., Jr., Pitkin, R. M., Boaz, D. P. and Brummel, M. C. (1975) Monosodium glutamate metabolism in the neonatal monkey. *Am. J. Physiol.* 229, 246.
31. Reynolds, W. A., Butler, V. and Lemkey-Johnston, N. (1976) Hypothalamic morphology following ingestion of aspartame or MSG in the neonatal rodent and primate: A preliminary report. *J. Toxicol. Environ. Hlth.* 2, 471-480.
32. Reynolds, W. A. (1979) Personal communication.
33. Windmueller, H. G. and Spaeth, A. E. (1975) Intestinal metabolism of glutamine and glutamate from the lumen as compared to glutamine from the blood. *Arch. Biochem. Biophys.* 171, 662.
34. Windmueller, H. G. and Spaeth, A. E. (1976) Metabolism of absorbed aspartate, asparagine, and arginine by rat small intestine in vivo. *Arch. Biochem. Biophys.* 175, 670.
35. Stegink, L. D. (1976) Absorption, utilization and safety of aspartic acid. *J. Toxicol. and Environ. Hlth.* 2, 215.
36. Stegink, L. D., Schmitt, J. L., Meyer, P. D. and Kain, P. H. (1971) Effect of diets fortified with DL-methionine on urinary and plasma methionine levels in young infants. *J. Pediat.* 79, 648-659.

37. Vaughan, D. A., Womack, M. and McClain, P. E. (1977) Plasma free amino acid levels in human subjects after meals containing lactalbumin, heated lactalbumin or no protein. *Am. J. Clin. Nutr.* 30, 1709-1712.
38. Bizzi, A., Veneroni, E., Salmona, M. and Garattini, S. (1977) Kinetics of monosodium glutamate in relation to its neurotoxicity. *Toxicology Letters* 1, 123-130.
39. Himwich, W. A., Petersen, I. M. and Graves, J. P. (1954) Ingested sodium glutamate and plasma levels of glutamic acid. *J. Applied Physiol.* 7, 196-199.

TABLES

**Table 1** Composition of the Beef Consomme Soup used in the study<sup>a</sup>

<u>Component</u>	<u>Percent Dry Weight</u>
Crude Protein	6.4
Fat	11.3
Sugar	22.5
Ash	56.0 <sup>b</sup>
Water	1.6
Free Glutamate	1.2

<sup>a</sup>Soup base reconstituted at level of 1.94 gm base/100 ml. This level provides 0.8 mg MSG/kg body weight when reconstituted soup fed at 4.2 ml/kg.

<sup>b</sup>54.4 percent is as NaCl

Table 2

PLASMA GLUTAMATE LEVELS (umoles/dl) IN NORMAL ADULTS INGESTING A SOLP--BEVERAGE MEAL WITH AND WITHOUT ADDED MSG AND MSG + APM

SUBJECT	ADDED TO MEAL	TIME (MINUTES)									
		0	15	30	45	60	90	120	150	180	240
RK	0	4.66	4.70	4.48	5.27	5.14	5.40	3.65	3.42	3.56	2.83
CL	0	4.75	7.00	6.41	5.70	4.69	4.79	5.80	4.17	4.77	4.39
CV	0	3.41	4.01	5.26	5.09	5.84	4.35	4.35	3.34	3.43	4.73
KH	0	7.03	6.02	5.70	5.89	6.64	7.99	4.74	5.74	5.98	8.02
JA	0	5.00	6.24	6.70	4.75	4.77	4.84	4.82	4.10	4.02	3.49
JB	0	2.72	2.33	2.62	3.33	2.96	3.09	2.67	2.08	2.40	2.51
HH	0	4.34	6.41	5.53	6.72	4.07	2.21	1.64	1.78	2.12	4.88
DH	0	3.37	4.62	4.33	4.64	3.94	3.12	3.87	4.01	5.23	2.84
PH	0	2.30	2.40	1.95	1.97	2.48	1.51	2.62	2.87	2.41	1.33
MEAN		4.18	4.86	4.78	4.82	4.50	4.14	3.79	3.50	3.77	4.00
S.D.		1.43	1.71	1.62	1.42	1.31	1.94	1.30	1.20	1.36	1.87
RK	MSG	3.00	10.8	16.8	10.0	7.37	4.50	3.84	2.75	2.73	2.46
CL	MSG	6.18	13.3	29.5	20.5	10.9	6.58	6.43	5.43	3.98	3.48
CV	MSG	4.15	6.29	23.6	12.5	8.50	6.03	4.54	3.84	4.14	5.15
KH	MSG	4.44	21.0	20.9	18.1	9.19	7.07	6.56	6.61	5.76	3.49
JA	MSG	3.87	11.0	18.3	7.93	5.67	4.70	4.41	3.65	4.10	3.24
JB	MSG	1.95	3.16	4.33	4.94	2.35	6.50	2.14	2.38	2.01	1.94
HH	MSG	5.00	8.99	20.4	19.8	11.2	7.70	6.36	3.67	2.95	5.28
DH	MSG	3.61	17.3	19.5	7.49	6.54	7.69	4.66	4.51	5.78	4.16
PH	MSG	2.62	3.05	16.0	5.48	3.14	4.75	2.15	2.42	2.36	2.33
MEAN		3.89	10.5	18.8	11.9	7.22	6.17	4.57	3.92	3.53	3.47
S.D.		1.31	6.07	6.77	6.16	3.14	1.26	1.69	1.41	1.15	1.23
RK	APM + MSG	4.81	12.7	20.3	18.0	10.9	7.27	5.47	4.98	4.17	3.77
CL	APM + MSG	5.06	5.70	15.6	16.5	---	2.75	3.38	5.30	2.55	2.24
CV	APM + MSG	4.89	14.3	26.7	18.7	8.57	3.83	3.59	2.19	2.22	3.90
KH	APM + MSG	6.88	30.1	32.0	20.6	10.5	6.74	7.51	6.29	7.00	3.90
JA	APM + MSG	5.20	5.43	27.4	9.99	7.35	4.79	5.79	5.51	4.58	5.11
JB	APM + MSG	2.46	5.45	6.48	3.73	5.52	2.47	3.15	1.60	1.99	1.34
HH	APM + MSG	2.84	4.78	9.99	14.3	10.3	6.00	4.18	4.00	3.56	3.80
DH	APM + MSG	4.84	9.47	24.7	21.4	12.0	4.42	5.28	4.22	5.23	3.10
PH	APM + MSG	3.94	3.41	26.3	11.4	5.53	3.96	3.02	2.80	3.30	2.54
MEAN		4.55	10.1	21.1	15.0	8.83	4.69	4.60	4.10	3.73	3.29
S.D.		1.33	8.41	8.68	5.87	2.49	1.68	1.52	1.61	1.74	1.12

PLASMA ASPARTATE LEVELS (umoles/dl) IN NORMAL ADULTS INGESTING A SOLID--BEVERAGE MEAL  
WITH AND WITHOUT ADDED MSG AND MSG PLUS ASPARTAME

SUBJECT	ADDED TO MEAL	TIME (Minutes)									
		0	15	30	45	60	90	120	150	180	240
RK	0	0.51	0.83	0.91	0.81	0.20	0.55	0.48	1.07	0.76	0.59
CL	0	0.29	0.15	0.25	0.29	0.20	0.34	0.39	0.26	0.23	0.33
CV	0	0.39	0.29	0.38	0.34	0.47	0.50	0.27	0.31	0.25	0.29
KH	0	0.44	0.49	0.35	0.44	0.43	1.10	0.43	0.29	0.49	0.54
JA	0	0.31	0.54	0.58	0.30	0.26	0.30	0.25	0.35	0.30	0.23
JB	0	0.83	0.46	0.43	0.70	0.59	0.72	0.85	0.59	0.50	0.60
HH	0	0.30	0.33	0.29	0.44	0.37	0.21	0.24	0.16	0.18	0.20
DH	0	0.44	0.91	0.91	1.12	0.36	0.40	0.84	0.67	0.92	0.44
PH	0	0.27	0.40	0.18	0.13	0.97	0.24	0.23	0.28	0.95	0.98
MEAN		0.42	0.49	0.48	0.51	0.43	0.48	0.44	0.44	0.51	0.47
S.D.		0.18	0.25	0.27	0.31	0.24	0.28	0.25	0.29	0.30	0.25
RK	MSG	0.47	1.25	1.74	0.92	0.87	0.43	0.20	0.32	0.37	0.20
CL	MSG	0.34	1.14	3.43	2.17	0.65	0.65	0.36	0.40	0.28	0.24
CV	MSG	0.46	0.63	3.10	1.09	0.34	0.46	0.47	0.47	0.41	0.52
KH	MSG	0.55	1.81	2.06	2.12	1.20	0.77	1.02	0.82	0.90	0.72
JA	MSG	0.75	1.39	2.67	1.15	1.03	0.99	0.71	0.36	0.48	0.33
JB	MSG	0.30	0.20	0.49	1.16	0.40	0.99	0.29	0.35	0.36	0.30
HH	MSG	0.51	0.31	2.10	2.03	0.80	0.43	0.57	0.55	0.38	0.61
DH	MSG	0.74	2.36	2.26	2.15	1.02	1.04	0.71	0.78	0.44	0.87
PH	MSG	0.30	0.37	1.85	0.45	0.34	0.40	0.21	0.20	0.21	0.21
MEAN		0.49	1.05	2.20	1.47	0.74	0.68	0.50	0.47	0.43	0.44
S.D.		0.16	0.69	0.81	0.61	0.31	0.25	0.26	0.20	0.18	0.23
RK	APH + MSG	0.45	1.99	4.00	6.58	2.04	0.60	0.43	0.31	0.67	0.59
CL	APH + MSG	0.51	0.12	3.20	2.17	---	0.22	0.22	0.83	0.20	0.60
CV	APH + MSG	0.40	1.76	8.80	4.49	1.12	0.56	0.56	0.39	0.28	0.38
KH	APH + MSG	0.33	5.92	7.59	3.58	0.62	0.40	0.37	0.28	0.33	0.26
JA	APH + MSG	0.41	0.42	6.81	1.08	0.53	0.87	0.26	0.16	0.74	0.34
JB	APH + MSG	0.26	0.44	0.52	0.73	1.18	0.33	1.30	0.18	0.18	0.18
HH	APH + MSG	0.64	0.72	1.80	2.99	1.67	0.83	0.64	0.77	0.81	0.60
DH	APH + MSG	0.32	1.41	3.85	4.04	1.23	0.51	0.44	0.15	0.34	0.29
PH	APH + MSG	0.57	0.52	5.55	1.90	0.63	0.29	0.26	0.17	0.22	0.15
MEAN		0.43	1.51	4.90	3.06	1.13	0.50	0.50	0.36	0.42	0.38
S.D.		0.12	1.77	2.89	1.84	0.54	0.23	0.33	0.26	0.25	0.18



Table 4

PLASMA PHENYLALANINE LEVELS (umoles/dl) IN NORMAL ADULTS INGESTING A SOUP--BEVERAGE MEAL  
WITH AND WITHOUT ADDED MSG AND MSG PLUS ASPARTAME

SUBJECT	ADDED TO MEAL	TIME (Minutes)									
		0	15	30	45	60	90	120	150	180	240
JA	0	5.04	5.94	5.61	5.11	5.22	5.07	4.90	5.18	5.89	5.66
JB	0	5.20	4.69	4.45	4.73	4.81	4.78	6.04	5.10	5.12	4.91
HH	0	6.40	6.10	5.52	5.81	6.31	6.58	6.35	6.08	7.38	6.52
KH	0	8.55	7.04	6.28	7.49	7.07	6.03	5.96	6.26	6.58	8.45
DH	0	6.97	4.64	5.24	4.22	4.56	3.73	5.78	5.65	5.93	4.42
PH	0	4.49	4.09	4.34	3.40	5.54	4.19	4.17	4.13	4.04	3.93
RK	0	4.96	3.22	4.05	5.71	3.27	3.11	4.16	4.01	4.55	4.52
CL	0	5.23	4.81	5.21	4.57	4.20	4.80	4.77	5.08	4.67	4.38
CV	0	4.71	4.89	4.76	4.43	4.19	4.35	4.44	4.67	5.76	5.87
MEAN		5.73	5.05	5.05	5.05	5.02	4.74	5.17	5.13	5.55	5.41
S.D.		1.33	1.15	0.71	1.18	1.16	1.08	0.86	0.78	1.06	1.42
JA	MSG	5.50	5.57	5.08	4.36	4.19	4.28	4.46	4.06	4.84	4.40
JB	MSG	5.86	4.21	4.20	2.80	3.72	3.78	3.47	4.44	4.61	3.94
HH	MSG	7.03	6.60	6.24	6.70	6.07	6.46	5.37	5.37	4.90	5.15
KH	MSG	7.49	6.68	5.54	8.02	7.33	7.67	8.77	7.99	7.68	8.60
DH	MSG	5.01	4.34	4.47	4.42	4.13	4.51	5.07	4.70	4.25	4.22
PH	MSG	5.13	5.03	5.20	3.86	5.01	4.62	5.42	5.14	4.18	4.48
RK	MSG	4.99	4.69	4.30	4.02	3.76	3.75	4.12	4.43	4.21	4.83
CL	MSG	5.09	12.1	6.40	5.80	6.07	5.79	5.49	5.26	5.40	5.75
CV	MSG	5.16	4.76	4.61	4.19	4.59	4.37	4.26	4.38	4.84	4.83
MEAN		5.70	6.00	5.12	4.91	4.99	5.03	5.16	4.98	4.99	5.13
S.D.		0.94	2.42	0.81	1.62	1.25	1.33	1.52	1.18	1.09	1.41
JA	MSG + APM	6.90	5.94	16.7	11.4	22.8	9.97	9.73	8.56	7.94	7.08
JB	MSG + APM	5.87	10.3	10.4	10.1	9.08	9.89	9.73	9.17	8.06	7.47
HH	MSG + APM	5.23	6.41	8.50	11.5	20.8	9.24	8.76	8.84	8.37	7.35
KH	MSG + APM	8.27	23.1	23.5	24.3	17.5	15.3	13.9	14.6	12.1	11.3
DH	MSG + APM	6.51	15.5	13.2	14.1	13.6	8.86	8.39	7.79	6.44	7.28
PH	MSG + APM	5.83	7.54	13.9	9.13	8.26	8.24	7.22	7.33	6.73	6.43
RK	MSG + APM	4.95	10.7	9.51	12.0	12.7	8.99	7.92	7.88	8.18	7.54
CL	MSG + APM	3.60	4.01	8.01	8.96		7.62	3.84	6.94	3.35	3.35
CV	MSG + APM	5.79	7.96	16.0	12.1	9.92	6.69	6.52	6.56	5.85	5.77
MEAN		5.88	10.2	13.3	12.6	11.7	9.42	8.45	8.63	7.45	7.06
S.D.		1.31	0.89	4.96	4.66	2.95	2.44	2.74	2.40	2.26	2.07

Table 5

PLASMA TYROSINE LEVELS (umoles/dl) IN NORMAL ADULTS INGESTING A SOUP--BEVERAGE MEAL  
WITH AND WITHOUT ADDED MSG AND MSG PLUS ASPARTAME

SUBJECT	ADDED TO MEAL	TIME (Minutes)									
		0	15	30	45	60	90	120	150	180	240
JA	0	5.48	6.34	5.89	5.38	5.52	4.97	4.97	4.84	5.20	4.95
JB	0	7.21	6.46	6.05	6.38	6.21	6.35	6.97	6.47	6.21	5.78
HH	0	6.43	6.18	5.39	5.59	6.08	5.82	5.89	5.76	6.71	5.90
KH	0	5.98	5.16	4.85	5.46	4.80	4.32	4.24	4.21	4.27	5.71
DH	0	8.34	5.65	6.42	5.26	5.54	4.92	6.32	6.33	6.21	4.34
PH	0	4.66	4.42	5.31	3.39	5.30	3.98	3.92	3.64	3.54	3.56
RK	0	4.46	4.77	4.57	4.43	4.04	4.27	4.30	4.54	5.37	5.66
CL	0	6.93	5.07	5.24	4.87	4.47	3.96	5.36	4.84	5.25	5.25
CV	0	5.51	5.16	5.25	4.73	4.27	4.53	4.40	4.70	4.33	4.18
MEAN		6.11	5.47	5.44	5.05	5.14	4.79	5.15	5.04	5.23	5.04
S.D.		1.25	0.73	0.68	0.84	0.78	0.83	1.06	0.96	1.04	0.84
JA	MSG	5.42	6.01	5.16	4.43	4.46	4.06	3.95	4.13	3.94	3.50
JB	MSG	5.69	4.21	4.34	2.64	4.24	3.68	3.29	4.01	4.35	3.20
HH	MSG	6.38	6.81	6.24	6.27	6.15	6.61	7.76	4.82	4.50	4.05
KH	MSG	5.71	4.39	4.27	5.83	5.26	4.98	5.46	5.10	4.79	5.22
DH	MSG	6.39	5.55	5.65	5.34	5.05	4.77	5.20	5.11	4.53	4.28
PH	MSG	6.14	5.84	5.88	4.55	6.03	4.82	5.51	4.98	4.30	4.01
RK	MSG	5.29	4.19	4.30	4.19	4.60	4.00	3.78	4.11	4.16	4.11
CL	MSG	6.50	5.77	5.48	5.33	5.24	4.75	4.94	4.86	4.76	5.49
CV	MSG	4.89	6.36	8.01	8.25	7.73	7.33	6.65	6.10	6.02	6.13
MEAN		5.82	5.46	5.48	5.20	5.42	5.00	4.84	4.80	4.50	4.44
S.D.		0.56	0.97	1.20	1.56	1.09	1.21	1.04	0.66	0.70	0.97
JA	MSG + APM	6.60	5.01	8.16	6.95	8.01	6.86	6.75	6.11	5.72	5.23
JB	MSG + APM	7.39	8.37	8.11	8.20	7.71	7.63	7.88	7.73	7.16	6.57
HH	MSG + APM	5.95	5.89	6.39	7.63	7.26	6.52	6.59	6.83	6.77	6.35
KH	MSG + APM	6.31	6.33	5.98	6.89	6.28	6.48	6.35	6.82	5.86	5.72
DH	MSG + APM	7.37	10.9	11.4	11.2	12.1	9.72	8.58	8.58	6.92	7.72
PH	MSG + APM	5.67	6.23	10.3	8.09	7.17	7.01	7.00	6.98	6.45	6.40
RK	MSG + APM	5.52	7.62	7.03	7.98	8.52	7.06	6.44	6.83	7.14	6.32
CL	MSG + APM	5.01	3.29	4.95	6.87		8.20	3.79	7.80	3.71	3.70
CV	MSG + APM	6.92	6.57	8.52	7.54	7.36	5.78	5.92	6.02	5.93	5.47
MEAN		6.30	6.69	7.87	7.93	8.15	7.33	6.59	7.08	6.18	5.94
S.D.		0.84	2.14	2.06	1.33	1.76	1.16	1.33	0.83	1.08	1.11

Table 6

PLASMA ALANINE LEVELS ( $\mu$ moles/dl) IN NORMAL ADULT INGESTING A SOUP--BEVERAGE MEAL  
WITH AND WITHOUT ADDED MSG AND MSG PLUS ASPARTAME

SUBJECT	ADDED TO MEAL	TIME (Minutes)									
		0	15	30	45	60	90	120	150	180	210
JA	0	29.6	30.4	26.6	23.7	24.0	23.8	23.9	25.6	24.9	24.4
JB	0	28.9	29.4	28.1	31.5	30.5	32.9	35.9	32.0	31.3	32.2
HH	0	47.2	41.6	35.4	36.6	44.8	45.5	45.8	44.3	57.0	42.5
KH	0	34.7	28.0	25.8	30.9	27.3	24.2	25.7	26.3	27.7	39.7
DH	0	44.8	35.8	36.0	34.8	38.9	31.9	36.2	40.2	30.0	30.0
PH	0	20.5	24.6	19.4	17.2	31.8	24.7	21.3	18.3	20.2	20.1
RK	0	24.5	26.2	26.1	23.4	21.4	22.8	24.1	27.1	32.6	30.9
CL	0	40.8	32.3	28.9	31.3	32.1	31.9	33.3	34.7	35.4	34.9
CV	0	23.1	20.1	22.7	22.4	22.2	23.3	24.1	27.4	23.9	22.2
MEAN		32.7	29.8	27.7	28.0	30.3	29.0	30.0	30.7	31.9	31.7
S.D.		9.74	6.32	5.37	6.51	7.77	7.45	8.18	8.03	10.5	7.22
JA	MSG	24.5	26.9	27.4	26.0	27.1	26.1	25.7	22.8	24.3	23.8
JB	MSG	35.7	28.8	31.9	24.0	35.4	35.2	29.5	30.0	32.6	26.5
HH	MSG	35.5	28.2	27.6	30.1	28.9	26.2	21.0	25.2	29.2	24.8
KH	MSG	26.3	22.9	19.7	27.6	25.6	25.0	29.7	25.8	24.9	30.9
DH	MSG	38.1	39.2	34.6	39.6	37.6	34.3	38.9	32.5	29.9	25.5
PH	MSG	26.9	27.5	29.2	29.4	29.8	25.7	33.2	27.1	30.7	22.3
RK	MSG	25.4	20.5	21.9	22.2	23.1	20.5	20.7	21.6	22.8	25.1
CL	MSG	31.5	29.8	34.3	37.4	38.8	34.3	33.6	33.3	36.5	34.3
CV	MSG	29.7	33.9	37.6	36.7	34.5	34.9	29.2	29.0	27.5	24.9
MEAN		30.4	29.6	29.4	30.3	31.2	29.1	29.1	27.5	28.7	26.5
S.D.		5.05	5.53	5.94	6.22	5.57	5.53	5.93	4.02	4.36	3.72
JA	MSG + APM	38.5	33.0	41.6	38.8	44.3	38.0	39.3	37.9	34.7	34.2
JB	MSG + APM	37.9	35.7	38.9	41.4	35.8	38.8	41.4	39.3	34.0	30.7
HH	MSG + APM	45.1	46.6	49.5	60.4	57.0	56.9	53.1	51.3	53.2	47.8
KH	MSG + APM	30.5	31.3	32.1	37.9	35.8	34.1	31.1	34.9	30.6	33.7
DH	MSG + APM	37.6	38.5	41.9	43.0	49.6	42.0	38.3	39.8	30.4	39.2
PH	MSG + APM	29.1	28.5	28.5	29.6	26.7	31.0	32.9	32.9	31.1	29.5
RK	MSG + APM	46.3	49.1	51.6	52.1	64.0	53.0	46.8	46.3	51.6	43.4
CL	MSG + APM	33.7	34.3	24.4	36.7		20.2	20.4	38.7	19.5	17.6
CV	MSG + APM	27.5	20.8	27.7	28.0	31.5	22.2	23.9	27.4	26.5	22.5
MEAN		36.2	35.3	37.4	41.5	45.0	37.4	36.4	38.9	34.7	34.7
S.D.		6.67	8.71	9.74	11.2	12.7	10.4	10.5	7.4	11.5	7.4

**Table 7**  
**EXPECTED DAILY INTAKE OF MONOSODIUM GLUTAMATE**  
**BASED ON PERSON-DAYS**  
**(Means and Percentiles by Age)\***

Age	Total Sample			
	Intakes, mg/kg/day			
	Mean	90th PCTL	99th PCTL	99.9th PCTL
0-5 months	0.3	0	11	25
6-11 months	1.9	1.9	36	46
12-23 months	6.8	30	43	61
2-5 years	5.5	23	37	56
6-17 years	2.7	10	25	40
18+ years	1.5	7	12	19

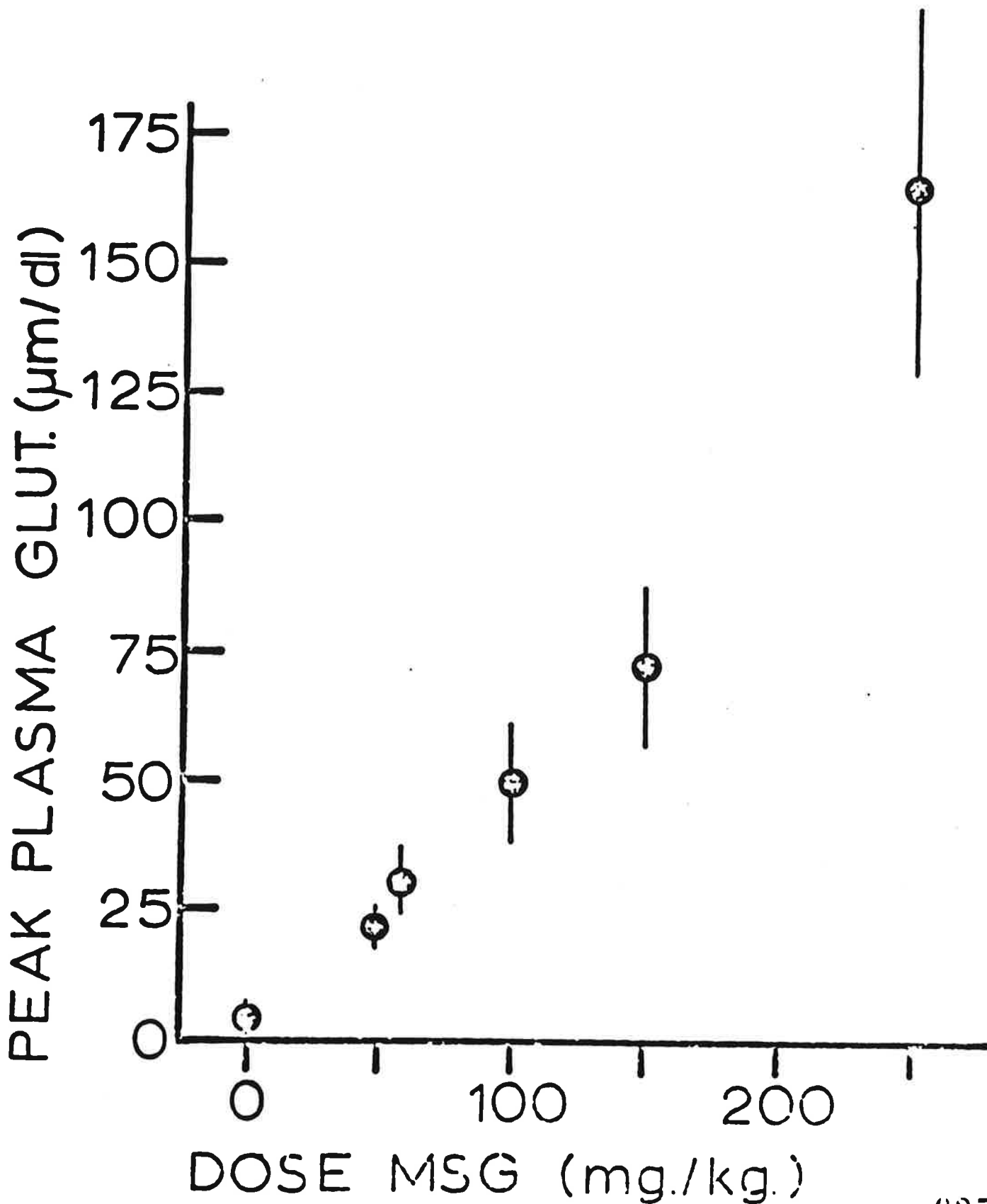
\* Reference 17

Table 8

PLASMA GLUTAMATE + ASPARTATE LEVELS (umoles/dl) IN NORMAL ADULTS INGESTING A SOUP--  
BEVERAGE MEAL WITH AND WITHOUT ADDED MSG AND ASPARTAME

SUBJECT	ADDED TO MEAL	TIME (Minutes)									
		0	15	30	45	60	90	120	150	180	240
RK	0	5.17	5.53	5.39	6.08	5.34	5.88	4.13	4.49	4.32	3.42
CL	0	5.04	7.15	6.66	5.99	4.89	5.18	6.19	4.43	5.00	4.72
CV	0	3.80	4.30	5.64	5.43	6.31	4.62	4.62	3.65	3.68	5.02
KH	0	7.47	6.51	6.05	6.33	7.07	9.09	5.17	6.03	6.47	8.56
JA	0	5.31	6.78	7.28	5.05	5.03	5.14	5.07	4.45	4.32	3.72
JB	0	3.55	2.79	3.05	4.03	3.55	3.81	3.52	2.67	2.90	3.11
HH	0	4.64	6.74	5.82	7.16	4.44	2.42	1.88	1.94	2.20	5.08
DH	0	3.81	5.53	5.24	5.76	4.30	3.52	4.71	4.68	6.15	3.28
PH	0	2.57	2.80	2.13	2.10	3.45	1.75	2.85	3.15	3.36	2.31
MEAN		4.60	5.35	5.25	5.33	4.93	4.60	4.24	3.94	4.27	4.36
S.D.		1.32	1.59	1.56	1.40	1.13	2.03	1.24	1.16	1.34	1.73
RK	MSG	5.47	12.1	18.5	10.9	8.24	4.93	4.04	3.07	3.10	2.66
CL	MSG	6.52	13.4	32.9	22.7	11.6	7.23	6.79	5.83	4.26	3.72
CV	MSG	4.61	6.92	26.7	13.6	8.84	6.49	5.01	4.31	4.55	5.67
KH	MSG	4.99	22.8	23.0	20.2	10.4	7.84	7.58	7.43	5.66	3.21
JA	MSG	4.62	12.4	21.0	9.08	6.70	5.69	5.12	4.01	4.58	3.57
JB	MSG	2.25	3.36	4.82	6.10	2.75	7.49	2.43	2.73	2.37	1.24
HH	MSG	5.51	9.30	22.5	21.8	12.0	8.13	6.95	4.22	3.33	5.89
DH	MSG	4.35	19.7	21.9	9.64	7.56	8.73	5.37	5.29	4.22	5.03
PH	MSG	2.92	3.42	17.9	5.93	3.48	5.35	2.36	2.62	2.57	2.54
MEAN		4.36	11.5	21.0	12.3	7.95	6.88	5.07	4.39	3.85	3.73
S.D.		1.24	6.30	7.14	7.03	3.08	1.25	1.77	1.49	1.01	1.46
RK	MSG + APM	5.21	14.7	24.3	24.6	12.9	7.87	5.90	5.29	4.84	4.36
CL	MSG + APM	5.57	5.82	18.8	18.7		2.97	3.60	6.23	2.75	2.84
CV	MSG + APM	5.29	16.1	35.5	23.2	9.69	4.39	4.15	2.58	2.50	4.28
KH	MSG + APM	7.21	36.0	39.6	23.6	11.1	7.14	7.88	6.57	7.33	4.16
JA	MSG + APM	5.61	5.85	34.2	11.1	7.88	5.66	6.05	5.67	5.32	5.45
JB	MSG + APM	2.72	5.89	7.00	4.46	6.70	2.20	4.45	1.78	2.17	1.52
HH	MSG + APM	3.48	5.50	11.8	17.3	12.0	6.83	4.82	4.77	4.37	4.40
DH	MSG + APM	5.16	10.9	28.6	25.4	13.2	4.93	5.72	4.37	5.57	3.39
PH	MSG + APM	4.51	3.93	31.9	12.3	5.16	4.25	3.28	2.97	3.52	2.69
MEAN		4.97	11.6	25.7	17.9	9.95	5.20	5.09	4.47	4.26	3.68
S.D.		1.22	9.55	10.5	6.84	2.60	1.70	1.36	1.59	1.60	1.11

Figure 1: Mean (+ SEM) peak plasma glutamate levels in normal adults administered MSG in water. Data at 50 mg/kg from this study. Data at 60 mg/kg from Bizzi et al. (38), at 100 and 150 mg/kg from Stegink et al. (14) and those at 240 mg/kg from Himwich et al. (39).



APPENDIX I

0 94 TUESDAY, JULY 24, 1979

ANIMOCRAMS  
AMINO ACID LEVELS UNOLES/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS A MINICHRISTATE

DIET-SES DOSE-00 MG/MS

SUBJECT DATE	WEIGHT	TIME	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240
CL	31479	•	1.06	1.04	1.57	1.25	0.71	1.11	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
CV	32179	•	1.69	1.84	2.13	2.18	3.12	3.04	3.23	3.42	3.07	3.19	3.42	3.07	3.19	3.42	3.07	3.19
DM	32779	•	1.41	1.47	1.71	1.77	1.79	2.90	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
JA	31379	•	2.67	2.71	2.18	2.94	2.71	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
JS	31779	•	2.13	2.28	2.79	3.58	2.77	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55	2.55
BU	32779	•	3.10	3.74	2.72	3.21	3.19	2.98	3.13	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12	3.12
PH	22779	•	0.79	1.80	2.76	2.24	2.13	1.94	1.78	2.78	2.33	2.92	2.78	2.33	2.92	2.78	2.33	2.92
BE	31079	•	1.70	2.04	1.82	1.37	3.6	2.22	2.56	1.96	2.24	2.22	2.56	1.96	2.24	2.22	2.56	1.96
MEAN			4.50	7.01	2.14	6.77	7.73	7.43	6.90	6.59	7.85	6.88	6.59	7.85	6.88	6.59	7.85	6.88
SD			2.55	2.78	2.26	2.97	3.08	2.92	2.99	3.01	3.17	2.82	2.99	3.01	3.17	2.82	2.99	3.01
N			1.725	1.725	0.915	1.651	1.715	1.803	1.646	1.526	1.878	1.667	1.646	1.526	1.878	1.667	1.646	1.526

DIET-SES PIC DOSE-53 MG/MS

SUBJECT DATE	WEIGHT	TIME	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240
CL	31379	•	1.45	1.45	1.53	1.58	1.67	1.46	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
CV	32779	•	3.12	3.82	2.74	2.81	2.99	3.25	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45	3.45
DM	32079	•	1.73	1.63	1.51	1.61	1.57	1.57	1.81	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74	1.74
JA	32779	•	1.73	1.67	1.73	1.57	1.57	2.23	1.81	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
JS	32379	•	1.52	1.80	1.98	1.61	1.46	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
BU	32379	•	5.5	3.71	3.98	4.31	4.9	4.41	3.99	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
PH	32679	•	2.71	3.17	1.82	2.27	2.6	2.22	2.74	2.61	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58
BE	32379	•	4.11	3.82	3.71	3.47	3.47	4.00	3.92	3.13	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
MEAN			3.43	4.93	3.44	4.71	5.43	4.73	4.73	4.68	5.32	5.32	5.32	5.32	5.32	5.32	5.32	5.32
SD			2.78	2.89	2.83	2.97	2.46	2.92	2.72	2.73	2.80	2.47	2.72	2.73	2.80	2.47	2.72	2.73
N			1.575	1.245	0.729	1.111	0.940	1.323	1.110	1.130	1.456	1.403	1.110	1.130	1.456	1.403	1.110	1.130

DIET-SES PIC AM DOSE-53 MG/MS

SUBJECT DATE	WEIGHT	TIME	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240
CL	22779	•	1.65	1.83	1.29	1.59	1.59	1.10	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
CV	31779	•	2.78	2.77	2.73	2.21	2.57	2.47	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
DM	31779	•	1.47	1.48	1.69	1.51	1.53	0.89	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
JA	32779	•	1.44	1.44	1.34	1.57	1.46	1.59	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
JS	32779	•	2.13	1.18	1.72	1.69	2.74	2.14	2.27	1.97	1.96	1.96	1.96	1.96	1.96	1.96	1.96	1.96
BU	31679	•	2.53	4.51	2.65	2.47	2.74	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44
PH	31379	•	1.53	3.48	3.74	3.61	3.71	3.23	3.40	3.78	3.52	3.52	3.52	3.52	3.52	3.52	3.52	3.52
BE	30679	•	2.53	2.53	2.62	2.31	2.74	2.28	2.21	2.52	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49
MEAN			1.72	1.66	1.72	1.59	1.50	1.44	1.35	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41
SD			2.70	2.89	2.73	2.64	3.4	2.91	2.64	3.07	2.89	2.89	2.89	2.89	2.89	2.89	2.89	2.89
N			2.667	2.244	2.445	2.229	2.743	2.503	2.673	2.163	2.231	2.621	2.231	2.163	2.231	2.621	2.231	2.163



SCUP & REVERSE STUD

0 54 TUESDAY, JULY 26, 1979

AMINO ACID LEVELS UNOL 9/100ML

PLASMA AMINO ACID IS NATIVE

DIET-SCU DOSE=0 MG/KG

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	10679	•	47.70	27.10	28.90	31.30	32.10	31.00	33.30	36.70	35.40	34.90	•	•	•	•	•	•
CV	32379	•	23.10	22.70	22.40	22.40	22.70	23.10	24.10	27.40	27.90	22.20	•	•	•	•	•	•
DM	22379	•	44.70	35.80	36.00	36.80	38.90	31.90	36.20	40.20	35.00	30.50	•	•	•	•	•	•
MM	30779	•	47.70	41.60	35.40	36.60	44.80	45.50	45.80	45.30	57.00	42.50	•	•	•	•	•	•
JA	41379	•	28.70	27.40	26.60	27.70	26.50	23.90	23.90	25.60	28.90	29.40	•	•	•	•	•	•
JB	41379	•	28.70	27.40	26.60	27.70	26.50	23.90	23.90	25.60	28.90	29.40	•	•	•	•	•	•
JM	22379	•	34.70	27.00	25.80	25.90	27.30	24.50	24.70	26.30	31.10	32.20	•	•	•	•	•	•
PM	22379	•	27.70	27.00	25.80	25.90	27.30	24.50	24.70	26.30	31.10	32.20	•	•	•	•	•	•
RM	31679	•	26.70	26.20	26.10	27.40	21.40	22.00	24.10	27.10	32.60	33.90	•	•	•	•	•	•
MEAN			32.40	29.00	27.40	27.90	29.30	29.00	30.00	30.60	31.80	31.60	•	•	•	•	•	•
SD			9.70	6.30	5.30	6.30	7.70	7.40	8.10	8.30	10.40	7.30	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCU DOSE=0.50 MG/KG

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	•	31.10	29.80	34.30	37.40	36.80	34.30	33.40	33.00	36.30	36.30	•	•	•	•	•	•
CV	32379	•	29.70	33.90	36.70	36.70	36.50	36.70	36.70	36.70	36.70	36.70	•	•	•	•	•	•
DM	22379	•	38.10	36.20	36.60	39.60	37.60	36.30	38.90	39.50	39.90	35.30	•	•	•	•	•	•
MM	32379	•	35.50	37.70	37.00	36.10	36.70	36.70	36.70	36.70	36.70	36.70	•	•	•	•	•	•
JA	22379	•	26.10	26.90	27.00	26.00	27.10	26.10	25.70	27.80	26.30	25.80	•	•	•	•	•	•
JB	32379	•	35.70	37.80	31.70	34.00	35.40	35.20	35.70	36.70	36.70	36.70	•	•	•	•	•	•
JM	32379	•	26.10	26.90	27.00	26.00	27.10	26.10	25.70	27.80	26.30	25.80	•	•	•	•	•	•
PM	32379	•	26.10	26.90	27.00	26.00	27.10	26.10	25.70	27.80	26.30	25.80	•	•	•	•	•	•
RM	32379	•	26.10	26.90	27.00	26.00	27.10	26.10	25.70	27.80	26.30	25.80	•	•	•	•	•	•
MEAN			32.40	29.00	27.40	27.90	29.30	29.00	30.00	30.60	31.80	31.60	•	•	•	•	•	•
SD			9.70	6.30	5.30	6.30	7.70	7.40	8.10	8.30	10.40	7.30	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCU DOSE=0.50 MG/KG

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22079	•	33.70	34.30	34.40	36.70	36.70	36.70	36.70	36.70	36.70	36.70	•	•	•	•	•	•
CV	31379	•	27.40	27.80	27.70	28.00	28.00	28.00	28.00	28.00	28.00	28.00	•	•	•	•	•	•
DM	31379	•	37.60	37.50	41.70	43.00	43.00	43.00	43.00	43.00	43.00	43.00	•	•	•	•	•	•
MM	22079	•	45.10	46.60	49.30	47.40	47.40	47.40	47.40	47.40	47.40	47.40	•	•	•	•	•	•
JA	32379	•	38.70	31.30	41.60	38.80	44.10	48.00	48.00	48.00	48.00	48.00	•	•	•	•	•	•
JB	31379	•	37.70	34.70	38.70	41.40	45.80	45.80	45.80	45.80	45.80	45.80	•	•	•	•	•	•
JM	31379	•	37.70	34.70	38.70	41.40	45.80	45.80	45.80	45.80	45.80	45.80	•	•	•	•	•	•
PM	31379	•	37.70	34.70	38.70	41.40	45.80	45.80	45.80	45.80	45.80	45.80	•	•	•	•	•	•
RM	31379	•	37.70	34.70	38.70	41.40	45.80	45.80	45.80	45.80	45.80	45.80	•	•	•	•	•	•
MEAN			36.20	35.30	37.10	41.40	43.10	43.10	43.10	43.10	43.10	43.10	•	•	•	•	•	•
SD			6.70	6.70	9.70	11.00	11.00	11.00	11.00	11.00	11.00	11.00	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

0 94 TUESDAY, JULY 26, 1979

AMINO ACID LEVELS UNDER 100ML

POW & DEVELOPER STUO

PLASMA AMINO ACID IS AT 101MML

DIST-500 MS 0000-00 MS/00

SUBJECT DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	31370	.	9.17	7.94	7.12	7.25	7.02	6.88	7.19	7.19	7.16	6.30	7.40	.	.	.	.	.	.	.
CV	32370	.	2.36	1.98	0.44	1.71	2.6	1.26	5.88	6.07	7.79	7.79	7.04	.	.	.	.	.	.	.
DM	32370	.	9.75	9.10	8.40	8.57	9.4	8.22	9.39	11.20	9.29	12.50	10.20	.	.	.	.	.	.	.
HA	31370	.	10.10	9.87	9.20	9.51	10.70	9.76	7.76	10.10	12.50	10.20	10.20	.	.	.	.	.	.	.
JA	31370	.	8.74	7.45	8.19	8.17	8.96	8.96	8.44	8.44	9.57	9.57	9.57	.	.	.	.	.	.	.
JZ	31370	.	9.78	9.14	8.42	8.71	7.76	9.03	10.10	9.44	9.57	9.57	9.57	.	.	.	.	.	.	.
MM	32370	.	9.11	8.41	4.12	9.09	6.79	4.01	4.19	6.83	4.01	6.18	6.18	.	.	.	.	.	.	.
PM	32370	.	9.70	6.03	6.76	6.34	6.76	7.30	9.48	6.24	7.30	6.23	6.23	.	.	.	.	.	.	.
RE	31370	.	6.9	6.01	6.55	6.14	6.74	6.56	5.86	6.58	7.97	7.86	7.86	.	.	.	.	.	.	.
PLAN	.	.	7.44	7.13	6.42	6.73	7.25	6.91	7.71	7.79	8.31	7.47	7.47	.	.	.	.	.	.	.
UN	.	.	2.414	2.605	2.740	2.814	2.647	2.740	2.659	2.126	2.287	2.336	2.336	.	.	.	.	.	.	.
W	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIST-500 MS 0000-00 MS/00

SUBJECT DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	31370	.	8.45	7.97	7.83	7.61	8.70	7.38	6.91	7.31	7.31	6.67	7.47	.	.	.	.	.	.	.
CV	32370	.	7.15	7.56	6.51	7.74	6.83	6.36	7.83	7.92	9.85	9.85	7.44	.	.	.	.	.	.	.
DM	32370	.	9.74	9.05	7.10	7.79	6.74	6.37	7.51	7.24	6.45	6.45	6.45	.	.	.	.	.	.	.
HA	32370	.	6.73	6.34	6.24	6.40	6.40	6.59	6.47	6.24	6.80	6.75	6.75	.	.	.	.	.	.	.
JA	32370	.	7.19	7.13	7.62	6.48	6.13	6.57	6.91	6.54	7.43	7.11	7.11	.	.	.	.	.	.	.
JZ	32370	.	7.71	7.96	7.77	6.96	7.48	7.45	7.07	7.39	7.67	7.67	7.67	.	.	.	.	.	.	.
MM	32370	.	6.21	6.98	6.25	6.71	6.71	6.55	6.21	5.97	5.77	5.77	5.77	.	.	.	.	.	.	.
PM	32370	.	12.18	11.90	11.40	9.61	10.40	10.40	9.33	9.77	9.74	9.44	9.44	.	.	.	.	.	.	.
RE	32370	.	7.65	6.48	6.21	5.84	6.67	6.07	6.38	6.31	6.17	6.17	6.17	.	.	.	.	.	.	.
PLAN	.	.	7.10	7.20	7.23	6.71	7.10	6.96	6.91	6.87	6.19	6.19	6.19	.	.	.	.	.	.	.
UN	.	.	1.478	1.884	1.846	1.349	1.349	1.429	1.805	1.127	0.879	1.310	1.310	.	.	.	.	.	.	.
W	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIST-500 MS 0000-00 MS/00

SUBJECT DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	32370	.	9.78	9.45	2.65	1.87	1.75	6.54	3.28	3.28	3.90	3.38	3.08	.	.	.	.	.	.	.
CV	31370	.	8.74	4.08	6.04	9.39	9.75	4.53	3.75	3.75	3.91	3.91	3.91	.	.	.	.	.	.	.
DM	31070	.	8.64	7.74	7.71	8.37	7.48	7.41	7.23	7.10	7.10	7.10	7.10	.	.	.	.	.	.	.
HA	32370	.	9.72	7.75	7.64	8.16	7.41	7.02	7.02	7.10	7.10	7.10	7.10	.	.	.	.	.	.	.
JA	32370	.	9.47	8.17	7.71	7.71	8.31	7.98	9.20	9.20	9.20	9.20	9.20	.	.	.	.	.	.	.
JZ	31670	.	9.27	7.74	7.49	7.39	7.16	6.55	7.08	6.76	6.48	6.48	6.48	.	.	.	.	.	.	.
MM	31770	.	7.78	6.35	6.46	5.14	5.14	5.81	5.81	5.81	5.81	5.81	5.81	.	.	.	.	.	.	.
PM	31770	.	8.78	6.98	6.98	5.14	7.14	7.81	7.81	7.81	7.81	7.81	7.81	.	.	.	.	.	.	.
RE	30570	.	8.70	6.11	7.40	7.40	8.60	7.55	7.01	6.16	6.16	6.16	6.16	.	.	.	.	.	.	.
PLAN	.	.	8.10	7.15	6.31	6.58	7.10	6.92	6.72	7.07	6.73	6.73	6.73	.	.	.	.	.	.	.
UN	.	.	1.372	1.766	1.737	1.477	1.278	1.532	1.806	1.201	1.704	1.704	1.704	.	.	.	.	.	.	.
W	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.



0 34 TUESDAY, JULY 26, 1978

AMINO ACIDS  
ANIONIC LEVELS UNCLE/100ML

SOUP & BEVERAGE STUDY

PLASMA AMINO ACIDS IS ASPARTATE

DIET-300 DOSE-93 ME/NG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	.	.	0.79	0.15	0.25	0.29	0.28	0.34	0.39	0.24	0.23	0.31	.	.	.	.	.	.
CV	31379	.	.	0.79	0.29	0.18	0.34	0.47	0.34	0.27	0.31	0.23	0.29	.	.	.	.	.	.
CH	31379	.	.	0.44	0.91	0.91	1.12	0.16	0.47	0.44	0.67	0.92	0.44	.	.	.	.	.	.
JA	31379	.	.	0.70	0.33	0.29	0.44	0.17	0.21	0.24	0.16	0.18	0.23	.	.	.	.	.	.
JB	31379	.	.	0.31	0.34	0.46	0.37	0.26	0.30	0.23	0.35	0.19	0.23	.	.	.	.	.	.
BM	31379	.	.	0.23	0.46	0.43	0.73	0.49	0.77	0.85	0.59	0.50	0.60	.	.	.	.	.	.
BM	31379	.	.	0.44	0.44	0.35	0.44	0.43	1.10	0.43	0.29	0.49	0.34	.	.	.	.	.	.
BM	31379	.	.	0.27	0.43	0.18	0.13	0.97	0.24	0.23	0.28	0.93	0.98	.	.	.	.	.	.
BM	31379	.	.	0.51	0.83	0.91	0.81	0.23	0.33	0.48	1.87	0.76	0.59	.	.	.	.	.	.
PLAN				0.47	0.49	0.48	0.51	0.43	0.48	0.44	0.44	0.31	0.47	.	.	.	.	.	.
SD				0.179	0.204	0.271	0.311	0.217	0.282	0.203	0.286	0.331	0.245	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIET-300 MISC DOSE-93 ME/NG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	.	.	0.36	1.14	1.14	1.43	1.17	0.43	0.34	0.40	0.28	0.24	.	.	.	.	.	.
CV	31379	.	.	0.46	0.43	1.10	1.09	1.09	0.47	0.44	0.47	0.41	0.52	.	.	.	.	.	.
CH	31379	.	.	0.74	0.34	2.34	2.14	1.12	1.12	1.12	0.57	0.38	0.51	.	.	.	.	.	.
JA	31379	.	.	0.51	0.31	2.10	2.03	0.80	0.80	0.43	0.35	0.38	0.61	.	.	.	.	.	.
JB	31379	.	.	0.74	1.34	1.34	1.34	1.34	0.77	0.77	0.34	0.34	0.34	.	.	.	.	.	.
BM	31379	.	.	0.30	0.20	0.47	1.14	1.14	0.40	0.77	0.29	0.34	0.34	.	.	.	.	.	.
BM	31379	.	.	0.54	1.01	2.20	2.12	1.20	0.77	1.02	0.82	0.90	0.72	.	.	.	.	.	.
BM	31379	.	.	0.33	0.37	1.03	0.45	0.45	0.44	0.44	0.32	0.37	0.20	.	.	.	.	.	.
BM	31379	.	.	0.47	1.23	1.23	0.47	0.47	0.43	0.43	0.32	0.37	0.20	.	.	.	.	.	.
PLAN				0.49	1.03	2.20	1.47	0.74	0.60	0.50	0.47	0.43	0.44	.	.	.	.	.	.
SD				0.16	0.69	0.81	0.67	0.31	0.25	0.26	0.20	0.18	0.23	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIET-300 MISC AMN DOSE-93 ME/NG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	.	.	0.51	0.47	1.23	1.17	1.17	0.23	0.23	0.83	0.23	0.63	.	.	.	.	.	.
CV	31379	.	.	0.43	1.74	0.35	4.49	1.12	0.46	0.36	0.39	0.28	0.38	.	.	.	.	.	.
CH	31379	.	.	0.12	1.41	3.05	4.04	1.73	0.31	0.31	0.15	0.34	0.29	.	.	.	.	.	.
JA	31379	.	.	0.46	0.72	1.83	2.99	1.47	0.83	0.44	0.77	0.81	0.63	.	.	.	.	.	.
JB	31379	.	.	0.41	0.47	4.81	1.09	0.53	0.53	0.53	0.16	0.74	0.16	.	.	.	.	.	.
BM	31379	.	.	0.26	0.44	0.52	0.71	1.18	0.33	1.38	0.18	0.18	0.18	.	.	.	.	.	.
BM	31379	.	.	0.33	0.92	7.59	3.58	0.43	0.43	0.43	0.28	0.33	0.24	.	.	.	.	.	.
BM	31379	.	.	0.17	0.92	7.59	1.72	0.43	0.29	0.24	0.17	0.22	0.15	.	.	.	.	.	.
BM	31379	.	.	0.45	1.99	4.70	0.58	0.58	0.43	0.43	0.31	0.47	0.19	.	.	.	.	.	.
PLAN				0.43	1.91	4.40	3.64	1.13	0.32	0.32	0.34	0.42	0.38	.	.	.	.	.	.
SD				0.120	1.14	2.888	1.847	0.315	0.232	0.312	0.243	0.249	0.188	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

0 54 TUESDAY, JULY 24, 1979 11

AMINO ACID LEVELS UNOLES/100ML

SOUP & BEVERAGE STOP

PLASMA AMINO ACID IS CITRULLINE

DIET-SCD DISE-00 MC/MG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	30679	.	.	3.21	2.93	2.22	1.49	1.78	1.43	2.49	2.16	2.98	2.41	.	.	.	.	.	.
CV	32179	.	.	2.47	2.44	2.44	2.14	2.19	2.01	2.18	2.41	2.01	2.26	.	.	.	.	.	.
DM	22179	.	.	2.93	2.94	2.94	2.89	3.11	2.57	2.65	2.34	2.64	1.59	.	.	.	.	.	.
WM	30779	.	.	3.13	4.90	3.70	4.34	4.12	3.90	3.90	4.22	4.47	3.48	.	.	.	.	.	.
JA	31379	.	.	3.27	3.79	3.79	3.87	4.23	4.03	4.19	3.71	4.39	3.92	.	.	.	.	.	.
JN	31779	.	.	2.46	2.26	2.19	2.31	1.78	2.14	1.98	2.21	2.34	2.18	.	.	.	.	.	.
EM	22779	.	.	1.96	2.48	1.88	2.43	2.96	2.01	2.30	2.49	2.34	2.73	.	.	.	.	.	.
PM	22179	.	.	2.29	2.75	2.97	1.71	3.22	2.91	2.67	2.89	2.82	2.11	.	.	.	.	.	.
BM	30679	.	.	10.20	7.38	7.16	7.91	7.83	9.02	7.49	7.41	9.11	8.36	.	.	.	.	.	.
MEAN				3.43	3.91	3.28	3.25	3.91	3.30	3.32	3.41	3.39	3.35	.	.	.	.	.	.
SD				2.716	1.677	1.699	1.077	1.808	2.323	1.738	1.673	2.221	2.833	.	.	.	.	.	.
N														.	.	.	.	.	.

DIET-SCD MSG DISE-10 MC/MG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31179	.	.	2.78	2.75	1.45	1.74	1.37	1.35	1.95	1.76	2.32	2.44	.	.	.	.	.	.
CV	32279	.	.	3.71	3.19	2.51	2.34	2.77	1.48	2.08	2.16	2.44	2.44	.	.	.	.	.	.
DM	22879	.	.	3.45	2.89	3.48	2.37	1.22	2.97	3.17	3.35	3.25	3.22	.	.	.	.	.	.
WM	32179	.	.	4.47	4.48	3.24	2.71	2.45	2.87	2.98	3.07	3.10	3.29	.	.	.	.	.	.
JA	22379	.	.	3.71	3.46	2.72	2.45	2.31	2.43	2.28	2.51	2.43	3.41	.	.	.	.	.	.
JN	32179	.	.	2.79	2.81	1.19	1.67	0.44	2.02	0.28	0.20	0.74	0.53	.	.	.	.	.	.
EM	32679	.	.	3.22	2.19	1.38	1.47	1.70	1.41	2.6	2.48	2.88	2.49	.	.	.	.	.	.
PM	22879	.	.	2.32	2.32	2.19	1.71	1.79	1.53	1.94	1.94	2.87	3.89	.	.	.	.	.	.
BM	32879	.	.	2.18	1.78	1.26	1.18	1.44	0.92	1.65	1.58	1.72	1.82	.	.	.	.	.	.
MEAN				3.18	2.82	2.16	1.73	1.45	1.92	1.92	2.18	2.33	2.59	.	.	.	.	.	.
SD				0.791	1.241	0.881	0.826	0.569	0.607	0.918	0.717	0.759	0.823	.	.	.	.	.	.
N														.	.	.	.	.	.

DIET-SCD MSG AM DISE-93 MC/MG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22179	.	.	2.70	1.95	0.99	0.56	0.56	0.46	0.44	1.17	0.72	0.71	.	.	.	.	.	.
CV	31779	.	.	9.25	7.43	5.86	4.43	5.14	4.37	5.61	7.46	6.56	9.09	.	.	.	.	.	.
DM	31279	.	.	3.73	3.59	2.17	1.97	1.27	1.79	2.12	3.79	2.82	2.75	.	.	.	.	.	.
WM	22879	.	.	4.72	4.81	3.88	3.49	2.92	3.15	3.26	3.58	3.75	4.14	.	.	.	.	.	.
JA	32279	.	.	5.17	2.55	2.14	2.19	2.48	2.89	3.35	3.95	3.41	4.22	.	.	.	.	.	.
JN	31679	.	.	1.11	1.45	0.44	0.89	0.78	0.65	0.72	0.71	0.99	0.99	.	.	.	.	.	.
EM	41279	.	.	2.48	2.24	1.78	1.14	1.76	1.93	2.13	2.60	2.42	2.58	.	.	.	.	.	.
PM	41779	.	.	3.75	3.26	2.78	2.67	1.91	1.83	1.93	2.09	2.67	3.01	.	.	.	.	.	.
BM	30679	.	.	3.6	2.78	1.42	1.37	1.24	1.49	1.33	2.13	2.39	2.14	.	.	.	.	.	.
MEAN				4.19	3.23	2.25	2.01	2.78	2.04	2.42	2.98	2.88	3.29	.	.	.	.	.	.
SD				2.193	1.945	1.490	1.252	1.175	1.234	1.421	1.997	1.716	2.491	.	.	.	.	.	.
N														.	.	.	.	.	.

0 34 TUESDAY, JULY 24, 1979 13

AMINO ACID LEVELS UMOL/L/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS ELUTIMATE

DIST-500 D03E-07 MC/76

SUBJECT	DATE	WEIGHT	TIME	2	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31079	-	-	0.75	7.50	6.41	5.74	4.49	4.79	5.00	4.17	4.77	4.39	-	-	-	-	-	-
CV	32179	-	-	3.41	4.71	3.26	5.04	4.34	4.34	4.15	3.34	3.43	4.73	-	-	-	-	-	-
DM	22179	-	-	3.17	4.67	4.31	6.64	5.74	3.12	3.06	4.31	5.23	2.84	-	-	-	-	-	-
MM	31779	-	-	6.14	6.41	5.53	6.72	4.77	2.21	1.44	1.78	2.12	4.88	-	-	-	-	-	-
JA	31379	-	-	2.73	2.33	2.62	3.33	2.76	3.09	2.67	2.08	2.62	3.49	-	-	-	-	-	-
MM	22179	-	-	1.13	4.07	5.75	5.04	6.44	7.96	4.74	5.74	5.96	6.02	-	-	-	-	-	-
MM	22179	-	-	2.10	2.49	1.95	1.95	2.48	1.51	2.42	2.87	2.41	1.53	-	-	-	-	-	-
ME	31679	-	-	4.16	6.74	6.48	9.27	5.14	5.40	6.05	3.42	3.56	2.83	-	-	-	-	-	-
MEAN				4.18	4.86	4.78	4.82	4.58	4.14	3.79	3.33	3.77	4.00	-	-	-	-	-	-
SD				1.077	1.714	1.621	1.422	1.313	1.041	1.373	1.198	1.355	1.370	-	-	-	-	-	-
N				9	9	9	9	9	9	9	9	9	9	-	-	-	-	-	-

DIST-500 MSG D03E-03 MC/76

SUBJECT	DATE	WEIGHT	TIME	2	14	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	-	-	0.18	11.93	29.50	20.37	11.00	6.58	6.43	5.43	3.98	3.48	-	-	-	-	-	-
CV	32179	-	-	0.15	4.29	23.43	12.54	6.50	6.53	4.54	3.24	4.14	3.15	-	-	-	-	-	-
DM	22079	-	-	3.41	17.43	19.57	7.44	6.54	7.04	4.46	4.51	3.73	4.16	-	-	-	-	-	-
MM	32179	-	-	5.28	12.09	20.40	19.07	11.70	7.70	6.36	3.67	2.93	3.28	-	-	-	-	-	-
JA	22179	-	-	3.67	11.03	18.30	7.93	5.47	4.70	4.41	3.63	4.13	3.24	-	-	-	-	-	-
MM	32379	-	-	1.75	3.16	4.31	4.94	2.15	6.50	2.14	2.38	2.01	1.94	-	-	-	-	-	-
MM	32079	-	-	4.44	21.70	23.93	18.17	9.19	7.27	6.46	6.61	5.76	3.49	-	-	-	-	-	-
MM	22079	-	-	2.62	9.75	16.33	9.48	9.14	6.75	2.15	2.42	2.36	2.82	-	-	-	-	-	-
ME	32379	-	-	2.77	12.03	16.06	10.04	7.17	6.50	3.84	2.75	2.73	2.46	-	-	-	-	-	-
MEAN				3.79	17.93	18.81	11.86	7.22	6.17	4.97	3.97	3.53	3.47	-	-	-	-	-	-
SD				1.235	6.366	6.748	6.141	3.140	1.261	1.696	1.414	1.151	1.232	-	-	-	-	-	-
N				9	9	9	9	9	9	9	9	9	9	-	-	-	-	-	-

DIST-500 MSG AMM D03E-03 MC/76

SUBJECT	DATE	WEIGHT	TIME	2	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22079	-	-	0.6	3.09	15.20	13.60	6.57	2.76	3.38	5.70	1.55	2.24	-	-	-	-	-	-
CV	31779	-	-	4.49	14.50	26.74	18.74	12.0	3.03	3.59	2.19	2.22	1.90	-	-	-	-	-	-
DM	31979	-	-	6.74	6.47	24.73	21.43	10.70	4.42	5.28	4.22	5.23	3.10	-	-	-	-	-	-
MM	22879	-	-	2.44	4.78	9.99	14.37	7.35	6.90	4.18	4.27	3.56	3.80	-	-	-	-	-	-
JA	30279	-	-	2.46	3.43	27.40	7.93	5.92	4.79	4.79	3.91	4.98	5.11	-	-	-	-	-	-
MM	31679	-	-	2.46	5.43	6.48	3.73	5.42	2.67	4.15	1.63	1.99	1.34	-	-	-	-	-	-
MM	41779	-	-	4.38	17.13	37.73	23.6	10.50	6.74	7.51	6.29	7.33	3.80	-	-	-	-	-	-
MM	41779	-	-	3.74	14.41	24.73	11.47	5.33	3.96	3.22	2.87	3.32	2.54	-	-	-	-	-	-
ME	30679	-	-	4.21	12.13	20.33	18.07	10.07	7.27	5.47	4.98	4.17	3.77	-	-	-	-	-	-
MEAN				4.15	17.08	21.71	14.17	8.33	6.09	4.88	4.14	3.73	3.29	-	-	-	-	-	-
SD				1.125	8.414	8.678	9.869	2.670	1.689	1.316	1.605	1.737	1.115	-	-	-	-	-	-
N				9	9	9	9	9	9	9	9	9	9	-	-	-	-	-	-

0 94 TUESDAY, JULY 26, 1979 13

AMINO ACID LEVELS UNOLES/100ML

SCUP & BEVERAGE STUD

PLASMA AMINO ACID IS GLUTAMINE

DIET-SCUB DIET-01 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	3-2779	•	•	69.00	67.30	67.10	67.30	66.30	66.10	66.40	61.20	60.90	•	•	•	•	•	•
CV	3-1779	•	•	59.70	56.70	56.70	56.70	56.70	56.70	56.70	56.70	56.70	•	•	•	•	•	•
DM	22879	•	•	67.90	67.10	67.10	67.10	67.10	67.10	67.10	67.10	67.10	•	•	•	•	•	•
MM	3-1779	•	•	67.40	66.10	66.10	66.10	66.10	66.10	66.10	66.10	66.10	•	•	•	•	•	•
JA	3-1779	•	•	67.70	67.20	67.20	67.20	67.20	67.20	67.20	67.20	67.20	•	•	•	•	•	•
JD	3-1779	•	•	67.10	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	•	•	•	•	•	•
MI	22-779	•	•	67.10	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	•	•	•	•	•	•
MM	22-779	•	•	67.10	66.60	66.60	66.60	66.60	66.60	66.60	66.60	66.60	•	•	•	•	•	•
RM	3-1679	•	•	66.70	66.10	66.10	66.10	66.10	66.10	66.10	66.10	66.10	•	•	•	•	•	•
PEAN	•	•	•	59.70	56.70	56.70	56.70	56.70	56.70	56.70	56.70	56.70	•	•	•	•	•	•
SO	•	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
N	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCUB MSC DIET-01 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	3-1779	•	•	61.30	59.70	59.70	59.70	59.70	59.70	59.70	59.70	59.70	•	•	•	•	•	•
CV	3-2779	•	•	61.30	59.70	59.70	59.70	59.70	59.70	59.70	59.70	59.70	•	•	•	•	•	•
DM	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
MM	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
JA	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
JD	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
MI	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
MM	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
RM	22879	•	•	62.10	61.30	61.30	61.30	61.30	61.30	61.30	61.30	61.30	•	•	•	•	•	•
PEAN	•	•	•	57.10	55.40	55.40	55.40	55.40	55.40	55.40	55.40	55.40	•	•	•	•	•	•
SO	•	•	•	57.10	55.40	55.40	55.40	55.40	55.40	55.40	55.40	55.40	•	•	•	•	•	•
N	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCUB MSC AM DIET-01 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22-779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
CV	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
DM	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
MM	22879	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
JA	3-2779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
JD	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
MI	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
MM	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
RM	3-1779	•	•	60.40	57.10	57.10	57.10	57.10	57.10	57.10	57.10	57.10	•	•	•	•	•	•
PEAN	•	•	•	57.10	55.40	55.40	55.40	55.40	55.40	55.40	55.40	55.40	•	•	•	•	•	•
SO	•	•	•	57.10	55.40	55.40	55.40	55.40	55.40	55.40	55.40	55.40	•	•	•	•	•	•
N	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•



0 54 TUESDAY, JULY 24, 1979 17

AMINO ACID LEVELS UNDER 3/107M

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS OLYCINE

DIET-568 DOSE-03 MG/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	70	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	3/27/79	•	•	23.40	27.10	19.10	19.10	18.20	18.80	21.20	20.30	22.30	22.30	23.70	•	•	•	•	•	•	
CV	3/27/79	•	•	22.10	27.10	22.20	20.40	21.50	21.40	21.20	23.00	27.40	27.40	20.90	•	•	•	•	•	•	
DM	3/27/79	•	•	25.10	27.10	27.40	27.40	27.40	27.40	27.40	27.40	27.40	27.40	21.80	•	•	•	•	•	•	
JA	3/27/79	•	•	27.10	27.10	27.40	27.40	27.40	27.40	27.40	27.40	27.40	27.40	28.30	•	•	•	•	•	•	
JO	3/27/79	•	•	27.10	27.10	27.40	27.40	27.40	27.40	27.40	27.40	27.40	27.40	27.30	•	•	•	•	•	•	
KH	3/27/79	•	•	17.70	17.20	16.70	16.70	16.70	16.70	16.70	16.70	16.70	16.70	22.30	•	•	•	•	•	•	
PH	3/27/79	•	•	18.10	17.90	17.30	15.90	18.10	18.10	18.10	18.10	18.10	18.10	22.30	•	•	•	•	•	•	
RE	3/27/79	•	•	18.20	18.30	18.30	18.40	17.00	18.50	17.30	18.00	22.30	22.30	27.70	•	•	•	•	•	•	
MEAN				22.20	27.10	20.97	21.17	22.50	21.20	21.71	22.20	22.30	22.30	21.92	•	•	•	•	•	•	
SD				4.627	3.806	3.448	3.884	3.116	3.991	4.159	4.779	5.827	5.827	2.941	•	•	•	•	•	•	

DIET-568 MSG DOSE-53 MG/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	70	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	3/27/79	•	•	22.40	21.90	21.30	22.00	22.00	22.00	21.00	21.00	21.00	21.00	21.00	•	•	•	•	•	•	•
CV	3/27/79	•	•	27.10	27.40	27.40	27.00	26.00	27.00	24.50	22.60	23.00	23.00	24.30	•	•	•	•	•	•	•
DM	3/28/79	•	•	26.70	21.50	24.70	22.40	22.40	23.50	24.60	21.90	27.80	27.80	18.70	•	•	•	•	•	•	•
JA	3/27/79	•	•	26.70	24.00	23.10	26.80	23.60	22.00	19.00	17.00	17.00	17.00	19.00	•	•	•	•	•	•	•
JO	3/27/79	•	•	21.50	21.30	22.40	17.80	15.40	18.70	19.00	20.00	17.80	17.80	19.00	•	•	•	•	•	•	•
JO	3/27/79	•	•	27.70	21.30	24.30	18.50	26.60	26.20	21.00	26.60	26.60	26.60	24.10	•	•	•	•	•	•	•
KH	3/27/79	•	•	16.10	14.10	10.70	18.80	16.80	16.80	11.20	18.10	17.30	17.30	19.50	•	•	•	•	•	•	•
PH	3/28/79	•	•	31.30	31.10	32.70	31.90	30.40	28.20	31.30	29.20	30.50	30.50	30.70	•	•	•	•	•	•	•
RE	3/27/79	•	•	19.00	14.70	17.10	18.60	17.50	16.50	17.10	17.60	17.30	17.30	18.10	•	•	•	•	•	•	•
MEAN				24.70	22.40	22.32	22.34	22.50	22.10	22.12	21.70	21.30	21.30	21.40	•	•	•	•	•	•	•
SD				5.219	4.743	4.166	5.167	4.721	4.431	4.315	4.878	4.329	4.329	4.231	•	•	•	•	•	•	•

DIET-568 MSG AM DOSE-53 MG/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	70	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	3/27/79	•	•	20.70	14.70	19.70	14.70	14.70	10.10	11.00	21.80	11.00	10.90	•	•	•	•	•	•	•	•
CV	3/27/79	•	•	24.70	21.00	21.20	18.40	24.70	24.70	24.70	24.70	24.70	24.70	18.70	•	•	•	•	•	•	•
DM	3/27/79	•	•	27.70	27.00	27.20	24.70	24.70	24.70	24.70	24.70	24.70	24.70	27.10	•	•	•	•	•	•	•
JA	3/27/79	•	•	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	25.80	•	•	•	•	•	•	•
JO	3/27/79	•	•	28.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	22.30	•	•	•	•	•	•	•
KH	3/27/79	•	•	26.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	27.40	•	•	•	•	•	•	•
PH	3/27/79	•	•	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	•	•	•	•	•	•	•
RE	3/27/79	•	•	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	24.70	•	•	•	•	•	•	•
MEAN				24.12	21.97	22.27	22.32	23.40	20.98	21.97	24.10	21.92	21.92	21.89	•	•	•	•	•	•	•
SD				3.731	4.203	3.376	4.514	3.973	4.371	4.519	4.315	4.838	4.838	4.871	•	•	•	•	•	•	•



0 54 TUESDAY, JULY 24, 1970 19

AMINOGRAMS  
AMINO ACID LEVELS UMOL/L/100ML

SOUP & BEVERAGE STUDY

PLASMA AMINO ACID IS HISTIDINE

DIET-500 MSG DOSE-50 MSG/50

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	3-479	.	.	8.76	7.57	7.30	7.62	7.43	7.04	7.31	7.41	7.01	7.62	.	.	.	.	.
CV	32379	.	.	7.12	6.21	7.09	6.26	6.44	6.30	6.35	6.87	6.37	5.99	.	.	.	.	.
DM	22379	.	.	9.44	7.65	8.48	8.34	8.44	8.03	8.61	10.97	9.68	8.13	.	.	.	.	.
MM	30379	.	.	9.70	9.11	9.05	9.38	9.51	9.52	9.12	9.38	8.06	8.23	.	.	.	.	.
JA	41379	.	.	6.11	6.31	6.76	6.74	6.44	6.68	6.46	6.37	6.80	6.67	.	.	.	.	.
JR	41379	.	.	9.20	8.33	7.37	8.45	7.84	8.50	9.20	8.50	8.49	8.57	.	.	.	.	.
JH	22379	.	.	5.79	5.54	5.72	6.77	6.18	5.51	5.81	6.09	6.35	7.53	.	.	.	.	.
MM	22379	.	.	6.89	5.67	4.74	3.85	6.60	5.15	4.84	5.77	5.34	4.74	.	.	.	.	.
RE	31079	.	.	8.19	7.42	8.95	8.15	7.88	8.13	7.63	8.01	9.61	9.45	.	.	.	.	.
MEAN				7.72	6.78	6.80	6.77	7.21	6.76	6.97	7.20	7.41	7.43	.	.	.	.	.
SD				1.786	1.244	1.313	1.339	0.970	1.254	1.679	1.791	1.570	1.632	.	.	.	.	.
N				9	9	9	9	9	9	9	9	9	9	.	.	.	.	.

DIET-500 MSG DOSE-50 MSG/50

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	.	.	8.13	7.71	7.85	7.69	8.17	7.71	7.22	7.46	7.36	7.91	.	.	.	.	.
CV	30279	.	.	7.78	7.65	8.06	7.79	8.47	8.47	7.97	7.94	7.95	8.75	.	.	.	.	.
DM	22879	.	.	7.10	6.58	6.43	7.02	6.75	6.36	7.02	6.73	5.86	5.49	.	.	.	.	.
MM	22379	.	.	8.54	17.13	9.79	10.97	10.50	12.37	7.19	7.16	6.42	6.83	.	.	.	.	.
JA	22379	.	.	7.72	7.79	7.79	8.57	8.51	6.71	7.31	6.46	7.35	6.98	.	.	.	.	.
JR	32379	.	.	12.90	8.44	8.56	6.08	10.20	9.84	9.18	9.99	10.30	9.84	.	.	.	.	.
JH	37679	.	.	6.41	5.31	4.96	6.81	6.77	6.51	5.7	7.17	7.23	7.55	.	.	.	.	.
MM	22879	.	.	8.46	7.87	7.87	6.14	7.28	6.51	5.46	6.11	5.93	6.67	.	.	.	.	.
RE	32379	.	.	12.13	7.31	9.20	8.39	9.74	8.69	9.24	9.35	9.64	8.85	.	.	.	.	.
MEAN				8.23	7.39	7.75	7.74	8.17	7.90	7.60	7.62	7.49	7.93	.	.	.	.	.
SD				1.757	1.613	1.570	1.814	1.672	1.507	1.146	1.298	1.431	1.102	.	.	.	.	.
N				9	9	9	9	9	9	9	9	9	9	.	.	.	.	.

DIET-500 MSG AM DOSE-53 MSG/50

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22779	.	.	9.71	4.50	3.16	5.24	6.15	3.13	4.13	6.59	3.98	3.99	.	.	.	.	.
CV	31779	.	.	7.58	4.14	6.70	5.76	7.16	4.35	5.85	6.24	5.55	6.01	.	.	.	.	.
DM	31779	.	.	7.58	7.42	7.40	7.18	7.34	7.34	6.51	7.43	7.58	7.81	.	.	.	.	.
MM	22879	.	.	6.62	6.44	6.18	6.97	6.49	6.35	6.40	6.63	7.95	7.69	.	.	.	.	.
JA	32779	.	.	7.60	6.33	6.57	5.97	6.41	6.58	7.47	5.78	6.54	6.79	.	.	.	.	.
JR	31779	.	.	1.15	7.41	9.13	8.67	8.95	7.98	8.95	8.12	8.33	7.44	.	.	.	.	.
JH	41379	.	.	7.47	6.98	5.42	6.15	6.73	6.67	6.94	6.58	6.51	6.91	.	.	.	.	.
MM	41779	.	.	7.13	6.54	5.67	6.17	6.75	6.79	6.78	6.50	6.68	6.95	.	.	.	.	.
RE	30679	.	.	8.17	7.87	7.83	8.17	8.63	8.22	7.89	8.68	9.01	8.39	.	.	.	.	.
MEAN				7.71	6.97	6.22	6.67	7.17	6.36	6.64	7.03	6.86	6.95	.	.	.	.	.
SD				1.774	1.779	1.666	1.197	1.119	1.304	1.366	3.996	1.510	1.400	.	.	.	.	.
N				9	9	9	9	9	9	9	9	9	9	.	.	.	.	.

0 24 TUESDAY, JULY 26, 1979 21

AMINOGRAMS  
AMINO ACID LEVELS UMOL/L/100ML

SOUP & ORANGE JUICE

PLASMA AMINO ACID IS ISOLEUCINE

DIET-SCB DSC-95 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	MS
CL	30479	•	•	6.15	8.24	7.72	4.70	7.04	4.41	7.31	7.79	7.79	5.08	•	•	•	•	•	•	•
CV	32179	•	•	10.10	7.10	6.37	4.08	5.98	5.88	6.12	5.48	5.48	5.53	•	•	•	•	•	•	•
DM	27179	•	•	7.79	4.97	5.77	6.73	5.73	6.67	6.68	6.50	6.50	5.32	•	•	•	•	•	•	•
DM	33179	•	•	8.16	5.37	6.57	5.75	7.75	6.92	9.74	6.71	6.71	6.57	•	•	•	•	•	•	•
JA	41179	•	•	4.46	5.17	6.79	5.50	4.59	4.85	6.54	6.88	6.88	4.44	•	•	•	•	•	•	•
JA	41179	•	•	5.76	4.47	6.69	6.91	9.34	9.55	6.13	4.97	4.97	4.81	•	•	•	•	•	•	•
EM	27079	•	•	4.18	4.91	5.74	5.24	4.59	4.58	6.45	4.55	4.55	7.24	•	•	•	•	•	•	•
EM	22079	•	•	3.56	3.84	4.74	4.64	3.99	4.34	5.94	4.35	4.35	5.72	•	•	•	•	•	•	•
EM	31679	•	•	3.79	4.17	3.94	4.73	4.22	4.34	4.20	5.03	5.03	5.22	•	•	•	•	•	•	•
MEAN				6.11	5.60	6.37	5.23	5.42	5.44	6.67	5.59	5.59	5.00	•	•	•	•	•	•	•
SD				2.712	1.317	1.003	0.748	1.339	1.379	1.576	1.107	1.107	1.283	•	•	•	•	•	•	•
N				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCB MSC DSC-95 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	MS
CL	31079	•	•	8.41	6.17	7.73	7.94	6.04	5.43	6.49	5.19	5.19	7.08	•	•	•	•	•	•	•
CV	32779	•	•	8.13	6.94	6.35	6.23	6.09	7.25	6.49	6.87	6.87	7.25	•	•	•	•	•	•	•
DM	32779	•	•	6.73	6.71	6.53	5.57	5.41	6.51	7.41	5.87	5.87	5.41	•	•	•	•	•	•	•
DM	32179	•	•	5.74	5.73	5.16	5.21	5.4	5.93	5.04	4.53	4.53	4.19	•	•	•	•	•	•	•
JA	22079	•	•	6.76	5.16	6.51	3.84	3.72	3.85	4.84	4.27	4.27	3.99	•	•	•	•	•	•	•
JA	32079	•	•	6.14	4.17	7.35	3.69	4.55	4.12	4.74	5.00	5.00	4.79	•	•	•	•	•	•	•
EM	35079	•	•	7.15	7.68	5.99	6.79	5.87	6.1	6.82	6.16	6.16	6.38	•	•	•	•	•	•	•
EM	22079	•	•	8.23	5.35	6.43	7.34	6.79	5.26	7.77	6.00	6.00	6.32	•	•	•	•	•	•	•
EM	32079	•	•	9.62	6.31	5.17	6.69	4.83	7.76	7.67	7.61	7.61	4.74	•	•	•	•	•	•	•
MEAN				7.13	6.51	6.63	6.09	5.74	6.78	6.56	5.86	5.86	5.93	•	•	•	•	•	•	•
SD				1.742	1.446	1.463	1.857	1.517	1.510	1.593	1.195	1.195	1.728	•	•	•	•	•	•	•
N				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-SCB MSC AM DSC-95 MC/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	MS
CL	22079	•	•	6.54	3.72	2.82	3.51	2.06	2.88	8.38	2.72	2.72	3.09	•	•	•	•	•	•	•
CV	31179	•	•	9.79	7.11	6.91	5.49	5.44	5.11	5.34	5.41	5.41	5.57	•	•	•	•	•	•	•
DM	31979	•	•	7.66	7.74	6.33	5.67	5.18	5.44	5.44	5.39	5.39	6.14	•	•	•	•	•	•	•
DM	22079	•	•	6.13	5.37	5.33	5.49	4.95	4.88	5.03	5.22	5.22	5.34	•	•	•	•	•	•	•
JA	31779	•	•	7.17	4.77	6.21	5.01	5.32	5.66	5.32	5.17	5.17	6.88	•	•	•	•	•	•	•
JA	31679	•	•	6.46	7.74	6.62	4.79	7.52	6.99	4.73	4.97	4.97	7.44	•	•	•	•	•	•	•
EM	41179	•	•	9.44	6.67	5.14	5.44	6.39	7.78	7.93	5.37	5.37	7.52	•	•	•	•	•	•	•
EM	41179	•	•	5.12	7.21	7.24	4.21	6.38	6.65	7.04	7.00	7.00	6.75	•	•	•	•	•	•	•
EM	32679	•	•	5.67	6.06	5.12	4.42	4.76	4.73	5.11	4.76	4.76	4.91	•	•	•	•	•	•	•
MEAN				7.15	6.75	5.75	4.94	6.16	5.91	6.45	5.32	5.32	5.72	•	•	•	•	•	•	•
SD				1.791	1.461	1.344	1.781	1.177	1.326	1.417	1.211	1.211	1.424	•	•	•	•	•	•	•
N				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

0 54 TUESDAY, MAY 26, 1979 23

AMINO ACID LEVELS UNDER/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS LYME/100

DIST-300 DISE-00 MZ/100

SUBJECT	DATE	WEIGHT	TIME	C	15	30	45	60	75	90	120	150	MIN	3	4	5	6	7	8	12	24	ME
CL	30679	.			13.70	12.70	10.10	11.83	10.40	10.27	10.30	11.20	12.50	11.03								
CV	32179	.			14.13	11.20	13.40	11.87	13.57	11.19	12.90	11.70	17.73	12.43								
DM	22179	.			14.73	12.70	12.40	12.40	13.17	11.90	14.30	14.83	13.10	12.43								
MM	33779	.			13.40	11.90	13.40	12.80	11.70	12.73	11.90	12.00	13.73	12.83								
JA	41379	.			12.00	13.70	13.70	13.70	12.40	11.70	11.80	11.40	12.70	12.03								
JB	41379	.			12.70	13.70	13.70	13.70	12.40	11.70	11.80	11.40	12.70	12.03								
BM	22179	.			8.30	7.75	10.70	12.73	9.77	8.78	8.93	9.37	9.44	9.37								
PM	22179	.			7.79	9.17	9.30	7.30	11.40	8.03	8.40	9.19	9.13	9.37								
ME	31679	.			11.00	11.03	10.30	10.13	9.78	10.33	9.79	10.20	12.30	12.00								
MEAN					11.79	11.26	10.99	10.95	10.54	10.43	10.91	11.12	11.42	11.37								
SD					2.076	1.083	1.834	2.067	1.913	1.100	1.881	1.794	1.736	1.322								
N																						

DIST-300 MZ DISE-97 MZ/100

SUBJECT	DATE	WEIGHT	TIME	C	15	30	45	60	75	90	120	150	MIN	3	4	5	6	7	8	12	24	ME
CL	31379	.			13.40	12.80	12.20	11.93	11.40	10.40	11.00	12.00	11.40	13.10								
CV	32179	.			14.40	14.40	13.40	13.17	14.00	14.07	14.00	13.17	13.80	14.00								
DM	22879	.			11.37	11.40	11.23	9.63	9.14	10.73	11.70	12.23	12.40	12.47								
MM	32379	.			11.0	11.13	10.83	10.73	10.40	11.47	9.42	7.63	9.02	8.88								
JA	22179	.			3.76	11.17	10.30	8.70	8.71	8.76	8.78	9.38	9.12	8.83								
JB	32379	.			11.40	12.00	9.70	8.81	8.63	9.37	8.44	9.71	11.10	10.93								
BM	32679	.			11.90	11.93	9.16	21.03	10.70	10.70	21.00	20.83	19.83	21.40								
PM	22879	.			11.70	10.90	12.00	11.73	12.40	11.73	11.70	12.00	11.80	13.00								
ME	32379	.			15.30	13.83	11.90	11.27	11.50	11.23	13.00	12.90	13.00	12.40								
MEAN					12.19	11.04	11.31	11.04	11.23	11.73	12.13	12.31	12.23	12.40								
SD					1.477	1.002	1.932	1.882	1.346	1.329	1.970	3.461	3.287	1.887								
N																						

DIST-300 MZ AM DISE-93 MZ/100

SUBJECT	DATE	WEIGHT	TIME	C	15	30	45	60	75	90	120	150	MIN	3	4	5	6	7	8	12	24	ME
CL	22079	.			7.10	6.87	5.40	6.74	6.74	6.72	7.32	11.40	5.69	5.99								
CV	31779	.			10.0	15.10	14.57	11.60	11.90	10.93	11.30	11.97	11.00	12.70								
DM	31979	.			14.40	13.43	13.23	11.63	11.70	11.80	11.80	12.33	11.00	12.70								
MM	22879	.			11.25	13.43	13.43	10.87	10.87	8.92	9.63	10.13	10.00	10.43								
JA	30279	.			16.70	16.50	14.10	9.19	11.70	10.30	10.90	10.60	10.30	10.40								
JB	31079	.			13.70	12.10	13.10	13.10	11.70	9.71	13.63	11.73	13.80	11.40								
BM	41779	.			12.73	10.30	13.93	11.20	12.40	12.10	12.90	14.40	11.73	12.80								
PM	41779	.			13.10	11.40	9.73	7.81	9.19	9.23	9.68	10.40	10.83	11.03								
ME	30079	.			11.19	11.63	9.48	9.23	9.29	9.29	8.71	9.63	10.20	10.20								
MEAN					13.12	12.47	10.44	9.83	10.34	9.61	10.12	11.33	10.19	12.73								
SD					2.813	2.743	2.354	1.763	1.305	2.133	2.182	1.401	1.778	2.101								
N																						

0 54 TUESDAY, JULY 24, 1979 25

AMINO ACID LEVELS UNCLE/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS LYSINE

DIEF-SELB DOSE-7 MG/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	30779	•	18.10	16.14	15.73	16.67	15.60	15.00	15.00	15.00	15.00	17.20	17.00	•	•	•	•	•	•
CV	32179	•	12.10	12.23	12.90	11.80	12.67	12.30	12.30	12.70	13.90	13.10	17.70	•	•	•	•	•	•
DI	22179	•	26.15	15.90	18.90	18.00	23.50	23.70	23.70	28.40	31.80	27.20	25.00	•	•	•	•	•	•
MI	30779	•	13.0	15.00	12.90	11.70	13.40	13.40	13.40	13.90	13.90	14.90	26.40	•	•	•	•	•	•
JA	41779	•	16.00	15.80	15.20	15.30	14.50	15.90	15.90	16.20	15.90	17.20	17.00	•	•	•	•	•	•
JE	41779	•	27.10	19.00	16.30	20.10	18.20	23.20	23.20	22.30	20.70	27.80	21.30	•	•	•	•	•	•
MI	22179	•	11.10	11.30	11.20	13.70	12.70	11.90	11.90	13.00	14.30	15.10	17.60	•	•	•	•	•	•
MI	22179	•	13.40	16.90	12.10	11.30	17.60	15.60	12.90	13.40	13.40	15.10	13.90	•	•	•	•	•	•
ME	41079	•	17.10	15.80	10.80	10.20	9.40	10.10	9.80	10.70	10.70	13.20	13.60	•	•	•	•	•	•
MEAN			19.30	16.56	16.16	16.30	15.15	14.92	14.92	16.06	16.69	17.07	18.30	•	•	•	•	•	•
SD			5.10	3.30	1.30	1.30	4.10	4.20	4.20	5.70	6.20	4.10	4.90	•	•	•	•	•	•
N														•	•	•	•	•	•

DIEF-SELB MSC DOSE-40 MG/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31179	•	17.40	16.50	16.80	16.30	16.50	16.50	16.50	16.40	16.80	16.70	18.10	•	•	•	•	•	•
CV	32179	•	14.10	16.10	16.40	13.90	14.70	15.60	15.60	14.30	14.30	14.70	15.70	•	•	•	•	•	•
DI	22179	•	27.80	19.70	19.30	15.10	15.10	20.10	22.10	22.50	21.30	19.20	18.50	•	•	•	•	•	•
MI	32179	•	12.10	12.70	20.50	21.50	27.40	27.30	27.30	14.30	14.30	13.60	13.90	•	•	•	•	•	•
JA	22179	•	12.10	12.70	11.90	17.40	17.40	11.00	11.00	11.80	10.90	12.40	11.90	•	•	•	•	•	•
JE	32179	•	27.00	16.40	17.30	12.60	17.00	17.00	17.00	18.50	19.70	20.30	19.30	•	•	•	•	•	•
MI	32179	•	13.70	11.70	11.70	16.60	16.60	16.60	16.60	16.60	16.60	16.60	21.00	•	•	•	•	•	•
MI	22179	•	26.10	27.30	27.30	16.10	20.40	18.40	18.40	17.40	18.90	18.90	18.60	•	•	•	•	•	•
ME	32179	•	16.90	13.90	13.70	12.30	14.00	13.40	13.40	14.90	16.00	15.00	16.60	•	•	•	•	•	•
MEAN			17.42	16.86	16.79	15.80	16.52	16.62	16.62	16.70	16.64	16.38	16.87	•	•	•	•	•	•
SD			1.10	1.60	0.90	1.20	1.20	1.20	1.20	1.20	1.10	2.00	2.90	•	•	•	•	•	•
N														•	•	•	•	•	•

DIEF-SELB MSC AM DOSE-40 MG/MS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	75	90	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22179	•	11.40	17.80	7.60	17.30	12.40	12.40	12.40	7.70	9.00	9.20	8.50	•	•	•	•	•	•
CV	31179	•	16.10	12.70	12.90	11.30	12.40	12.40	12.40	11.30	12.40	11.70	12.80	•	•	•	•	•	•
DI	31179	•	17.00	16.20	16.30	15.50	16.70	16.70	16.70	15.70	16.70	15.60	17.50	•	•	•	•	•	•
MI	22179	•	22.10	21.70	21.30	22.20	22.20	22.20	22.20	22.20	21.40	24.20	26.10	•	•	•	•	•	•
JA	32179	•	16.10	15.80	13.40	11.90	16.10	16.10	16.10	14.00	14.10	13.70	13.90	•	•	•	•	•	•
JE	32179	•	19.40	17.60	17.10	16.70	16.40	15.50	15.50	17.30	17.00	16.60	17.20	•	•	•	•	•	•
MI	41779	•	12.10	17.00	12.70	11.70	16.10	16.10	16.10	16.10	16.10	16.10	16.30	•	•	•	•	•	•
MI	41779	•	18.10	17.10	16.40	15.60	15.60	15.60	15.60	16.00	16.00	16.00	16.30	•	•	•	•	•	•
ME	30679	•	12.10	11.80	12.00	12.20	13.70	12.90	12.90	12.70	16.10	15.30	16.70	•	•	•	•	•	•
MEAN			16.76	15.69	14.22	16.40	15.10	15.10	15.10	15.10	16.30	15.35	16.22	•	•	•	•	•	•
SD			1.10	1.10	1.10	1.40	1.10	1.10	1.10	1.10	1.10	1.10	1.10	•	•	•	•	•	•
N														•	•	•	•	•	•

0 34 TUESDAY, JULY 26, 1970 27

AMINOGRAMS  
AMINO ACID LEVELS UMOLS/100ML

SOUP & MEAT/AGE STUD

PLASMA AMINO ACID IS PETHIOHENE

SUBJECT	DATE	WEIGHT	TIME	AMINO ACID LEVELS UMOLS/100ML											
				3	15	30	45	60	90	120	150	180	3	4	5
CL	11/679	•	3:45	4.55	2.72	4.36	2.76	4.36	4.36	2.84	4.46	4.46	4.60	3.75	•
CV	12179	•	4:47	2.98	3.11	2.97	3.71	3.71	3.71	3.71	3.41	3.41	3.17	3.15	•
DM	12179	•	4:23	4.17	4.46	3.90	4.10	4.10	4.02	4.32	4.87	4.87	4.07	3.76	•
JA	11779	•	3:18	3.13	2.65	2.71	3.71	3.71	3.71	3.45	3.31	3.31	3.35	2.94	•
JA	11179	•	2:41	3.27	3.73	3.96	2.75	2.75	3.22	2.93	3.11	3.11	3.35	3.19	•
JA	11179	•	3:16	3.48	2.72	3.71	2.75	2.75	3.22	2.93	3.11	3.11	3.35	2.83	•
MM	12179	•	2:23	2.96	2.66	2.71	2.71	2.71	1.93	2.11	1.74	1.74	2.35	1.11	•
MM	12179	•	2:2	1.99	2.43	2.43	2.43	2.43	2.12	1.97	2.17	2.17	1.87	2.46	•
MM	11679	•	1:16	2.63	2.68	2.68	2.39	2.39	2.57	2.66	3.25	3.25	3.19	3.98	•
MM	117	•	1:17	1.16	3.01	3.17	2.93	2.93	3.13	3.05	3.28	3.28	3.28	3.20	•
MM	117	•	1:19	0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940	•

0 0181-100 M15 0034-43 MC/NE

SUBJECT	DATE	WEIGHT	TIME	AMINO ACID LEVELS UMOLS/100ML											
				3	15	30	45	60	90	120	150	180	3	4	5
CL	11379	•	4:21	3.33	3.29	3.57	4.43	4.43	3.25	3.01	4.97	4.97	3.41	4.86	•
CV	12779	•	4:13	4.10	3.48	3.18	2.64	2.64	3.99	3.99	3.86	3.86	3.95	4.58	•
MM	12879	•	3:4	2.91	2.64	2.64	2.64	2.64	2.44	2.44	2.77	2.77	2.77	2.57	•
MM	12179	•	3:43	3.16	3.12	3.42	3.42	3.42	3.30	2.61	2.77	2.77	3.25	2.68	•
MM	12179	•	2:46	2.77	2.97	2.41	2.92	2.92	2.57	2.43	2.11	2.11	2.59	2.61	•
MM	12179	•	4:13	3.98	3.35	4.67	3.71	3.71	4.15	3.51	3.71	3.71	4.26	3.95	•
MM	10479	•	2:17	3.46	1.60	3.69	3.69	3.69	2.71	3.90	3.19	3.19	2.49	3.15	•
MM	12879	•	4:19	3.46	4.62	4.18	3.96	3.96	3.34	3.29	4.19	4.19	4.35	3.16	•
MM	12179	•	3:13	4.42	2.78	2.78	2.78	2.78	2.88	4.41	4.33	4.33	4.38	2.96	•
MM	117	•	3:27	3.64	3.78	3.78	3.78	3.78	3.41	3.28	3.96	3.96	3.92	3.94	•
MM	117	•	1:16	0.879	1.417	1.179	0.752	0.752	0.917	0.631	0.792	0.792	0.772	0.904	•

0 0181-100 M15 0034-43 MC/NE

SUBJECT	DATE	WEIGHT	TIME	AMINO ACID LEVELS UMOLS/100ML											
				3	15	30	45	60	90	120	150	180	3	4	5
CL	12179	•	2:19	1.86	1.54	2.44	2.44	2.44	1.32	1.34	3.04	3.04	1.77	1.76	•
CV	11779	•	3:48	1.41	2.62	2.71	2.71	2.71	2.11	2.14	2.81	2.81	2.66	2.21	•
MM	11779	•	3:2	1.14	2.46	2.46	2.46	2.46	2.25	2.31	2.53	2.53	2.43	2.43	•
MM	12879	•	3:6	1.14	2.67	2.76	2.76	2.76	2.47	2.78	2.97	2.97	3.93	3.12	•
MM	12279	•	2:58	3.27	3.78	2.59	2.59	2.59	2.78	2.87	2.98	2.98	2.63	2.63	•
MM	11679	•	2:56	2.63	2.77	2.77	2.77	2.77	2.34	4.52	2.57	2.57	2.35	2.46	•
MM	11179	•	4:27	1.81	2.44	2.44	2.44	2.44	1.58	1.79	3.73	3.73	2.78	4.17	•
MM	11179	•	4:28	2.35	2.22	2.39	2.39	2.39	2.02	2.27	2.44	2.44	2.39	2.44	•
MM	11479	•	1:58	1.68	3.14	1.87	1.87	1.87	3.65	2.86	2.98	2.98	1.23	3.20	•
MM	117	•	1:17	1.96	2.54	2.71	2.71	2.71	2.55	2.57	3.09	3.09	2.65	2.74	•
MM	117	•	1:16	0.879	0.879	0.879	0.879	0.879	0.758	0.622	0.825	0.825	0.825	0.825	•

0 94 TUESDAY, JULY 26, 1979 29

AMINO ACID LEVELS UNLESS/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS ORNITHINE

DIET-500 MSG-0 MC/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	48
CL	30779	.	.	21.5	46.9	43.3	49.4	57.3	4.58	4.84	4.92	4.93	4.93	4.92	.	.	.	.	.	.	.
CV	32379	.	.	27.5	46.9	50.9	49.4	4.88	4.90	4.59	4.75	4.75	4.75	4.75	.	.	.	.	.	.	.
DM	32379	.	.	21.1	46.9	8.88	6.34	6.43	5.89	7.40	7.27	11.90	11.90	11.90	.	.	.	.	.	.	.
WM	30779	.	.	6.4	46.9	4.39	6.24	7.10	7.37	6.43	7.13	6.36	6.36	6.36	.	.	.	.	.	.	.
JA	31379	.	.	6.18	46.9	6.54	6.37	7.06	6.33	6.72	6.23	6.20	6.20	6.20	.	.	.	.	.	.	.
JN	31379	.	.	41.9	46.1	12.1	4.28	3.79	4.19	4.74	3.88	3.74	3.74	3.77	.	.	.	.	.	.	.
WH	32379	.	.	21.4	68.1	15.1	4.63	4.5	3.79	4.27	4.14	4.03	4.03	3.77	.	.	.	.	.	.	.
PM	32379	.	.	2.3	20.1	2.2	7.69	3.63	9.05	2.72	2.64	3.62	3.62	2.67	.	.	.	.	.	.	.
BR	31679	.	.	91.1	11.3	3.20	3.21	2.72	2.91	2.89	2.53	3.14	3.14	3.09	.	.	.	.	.	.	.
PCAN				58.2	46.9	4.83	4.63	4.71	4.34	4.66	4.61	5.12	4.93	4.93	.	.	.	.	.	.	.
SO				2.769	1.285	1.833	1.286	1.375	1.408	1.488	1.677	2.739	2.739	2.663	.	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIET-500 MSG P--E-90 MC/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	48
CL	31379	.	.	5.37	5.97	7.28	7.39	7.40	6.42	5.75	5.32	5.07	5.07	5.29	.	.	.	.	.	.	.
CV	31279	.	.	6.15	6.41	8.73	8.73	8.48	7.80	6.28	5.63	5.55	5.55	5.84	.	.	.	.	.	.	.
DM	32379	.	.	6.75	7.78	7.24	7.86	7.72	7.18	7.82	7.76	6.27	6.27	5.94	.	.	.	.	.	.	.
WM	32379	.	.	5.73	6.27	7.86	6.54	6.27	7.94	6.87	6.68	6.72	6.72	6.16	.	.	.	.	.	.	.
JA	32379	.	.	6.16	6.52	6.48	4.42	4.79	4.03	4.09	3.43	3.41	3.41	3.34	.	.	.	.	.	.	.
JN	32379	.	.	6.19	5.37	6.12	7.82	8.71	8.00	7.99	4.19	7.43	7.43	7.18	.	.	.	.	.	.	.
WH	32379	.	.	5.77	6.68	5.13	6.74	6.76	5.97	6.55	5.75	5.13	5.13	5.49	.	.	.	.	.	.	.
PM	32379	.	.	6.76	6.62	15.23	17.17	17.30	8.89	8.94	8.46	8.32	8.32	7.12	.	.	.	.	.	.	.
BR	32379	.	.	6.63	9.22	10.29	10.37	11.30	10.20	10.20	9.78	9.29	9.29	8.37	.	.	.	.	.	.	.
PCAN				5.73	6.33	7.28	7.59	8.15	7.53	6.94	6.04	6.01	6.01	5.63	.	.	.	.	.	.	.
SO				1.738	1.925	2.260	2.269	2.645	1.937	1.985	2.377	1.935	1.935	1.681	.	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

DIET-500 MSG AMN MSG-03 MC/KG

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	48
CL	32079	.	.	5.13	7.98	6.27	4.34	6.38	2.78	4.33	5.96	2.90	2.90	3.36	.	.	.	.	.	.	.
CV	31379	.	.	6.73	6.31	7.73	4.22	6.38	2.36	4.33	4.38	3.90	3.90	4.18	.	.	.	.	.	.	.
DM	31779	.	.	6.70	6.64	7.13	7.24	7.75	7.24	6.65	6.34	5.67	5.67	6.06	.	.	.	.	.	.	.
WM	32379	.	.	6.65	6.78	5.78	7.79	6.53	6.09	5.98	5.87	6.50	6.50	6.20	.	.	.	.	.	.	.
JA	32379	.	.	6.09	5.66	5.67	6.14	5.69	6.74	5.15	6.71	4.68	4.68	3.88	.	.	.	.	.	.	.
JN	31679	.	.	6.75	6.74	5.14	4.67	4.74	4.53	4.72	4.37	3.93	3.93	3.71	.	.	.	.	.	.	.
WH	31379	.	.	11.70	13.70	11.53	12.34	13.40	12.40	11.30	12.20	11.35	11.35	10.60	.	.	.	.	.	.	.
PM	41779	.	.	6.13	6.72	7.78	7.79	6.79	7.08	6.28	6.14	6.13	6.13	6.01	.	.	.	.	.	.	.
BR	30779	.	.	3.14	4.50	5.07	6.11	5.62	4.77	4.16	4.31	3.88	3.88	3.78	.	.	.	.	.	.	.
PCAN				5.89	5.83	6.34	6.03	7.11	6.13	5.93	6.76	5.37	5.37	5.11	.	.	.	.	.	.	.
SO				2.147	2.916	2.130	2.219	2.676	2.716	2.193	2.641	2.504	2.504	2.287	.	.	.	.	.	.	.
N				.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

0 54 TUESDAY, JULY 24, 1979 31

AMINOGRAMS  
AMINO ACID LEVELS UMOL/L/100ML

SOUP & BEVERAGE STUN

PLASMA AMINO ACID IS OMEGATLANTINE

DIET-SCB DOSE-99 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	240
CL	30679	.	.	4.76	3.72	4.05	5.71	3.27	3.11	4.16	4.01	4.55	4.52
CV	32179	.	.	5.23	4.81	5.21	4.57	4.20	4.80	4.77	5.08	4.67	4.70
DM	22179	.	.	6.97	4.64	5.24	4.22	4.56	3.73	5.78	5.64	5.93	4.42
MM	30779	.	.	6.50	6.14	5.52	5.81	6.11	6.18	6.15	6.08	7.38	6.52
JA	31379	.	.	5.76	5.74	5.61	4.11	5.22	4.07	4.90	5.18	5.66	4.91
JB	31279	.	.	5.70	4.49	4.45	4.79	6.01	4.78	6.04	5.10	5.12	4.91
EM	22179	.	.	8.55	7.76	6.28	7.47	7.77	6.03	5.96	6.26	6.58	8.45
PM	22179	.	.	4.59	4.09	4.36	3.44	5.54	4.17	4.17	4.13	4.06	3.93
RM	31679	.	.	4.71	4.89	4.76	4.43	4.19	4.35	4.44	4.67	5.76	5.87
MEAN				5.73	5.05	5.29	5.04	5.22	4.76	5.17	5.13	5.55	5.41
SD				1.978	1.166	0.712	1.179	1.149	1.078	0.861	0.784	1.058	1.015
N				9	9	9	9	9	9	9	9	9	9

DIET-SCB MSG DOSE-99 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	240
CL	31179	.	.	4.79	4.69	4.30	4.02	3.76	3.75	4.12	4.43	4.21	4.03
CV	32279	.	.	5.9	12.10	6.40	5.83	6.27	5.79	5.49	5.25	5.40	5.75
DM	22879	.	.	5.1	4.36	4.47	4.47	4.13	4.31	4.72	4.72	4.22	4.22
MM	32179	.	.	7.3	6.83	6.24	6.17	6.17	6.46	5.77	5.77	4.90	5.15
JA	32379	.	.	5.70	5.57	5.08	4.34	4.19	4.24	4.46	4.26	4.84	4.40
JB	32379	.	.	4.76	4.21	4.20	2.87	3.72	3.78	3.47	6.44	4.61	3.96
EM	32879	.	.	7.49	6.68	5.54	8.02	7.33	7.67	7.99	7.99	7.88	8.63
PM	22879	.	.	5.13	5.03	5.78	3.86	5.11	4.62	5.42	5.16	4.18	4.48
RM	32379	.	.	5.16	4.76	4.61	4.14	4.59	4.37	4.26	4.38	4.04	4.83
MEAN				5.70	6.00	5.12	4.91	4.99	5.03	5.16	5.09	4.99	5.13
SD				0.716	2.599	0.812	1.623	1.249	1.334	1.321	1.178	1.295	1.406
N				9	9	9	9	9	9	9	9	9	9

DIET-SCB MSG AM DOSE-99 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	240
CL	22179	.	.	3.40	4.01	4.01	4.01	8.74	7.62	3.84	6.94	3.35	3.35
CV	31779	.	.	5.79	7.96	16.70	12.14	13.60	8.67	6.52	6.56	5.85	5.77
DM	31979	.	.	6.71	15.57	13.25	14.14	13.60	8.86	8.19	7.79	6.44	7.28
MM	22879	.	.	5.23	6.41	8.50	11.57	10.70	9.24	8.76	8.56	8.37	7.58
JA	32279	.	.	6.70	5.04	16.70	11.47	11.50	9.97	7.73	8.56	7.94	7.08
JB	31679	.	.	5.77	1.70	10.40	13.13	9.8	9.59	9.73	9.17	8.26	7.47
EM	31779	.	.	8.27	21.15	23.53	24.37	17.00	15.37	13.90	14.45	12.10	11.32
PM	31779	.	.	5.03	7.54	13.93	9.13	8.26	8.24	7.22	7.33	6.73	6.53
RM	32479	.	.	4.25	10.70	9.51	12.07	12.70	8.79	7.92	7.88	8.18	7.54
MEAN				5.88	11.16	13.32	12.47	11.71	9.42	8.45	8.43	7.45	7.06
SD				1.376	5.291	4.963	4.663	2.952	2.462	2.715	2.453	2.359	2.072
N				9	9	9	9	9	9	9	9	9	9



0 54 TUESDAY, JULY 24, 1979 33

AMINO ACID LEVELS UNDER 23/10794

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS PICTURE

DIET-500 MSG-00 MSG/RS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	30479	•	32.50	27.70	25.50	26.37	25.70	29.70	31.60	29.10	32.20	30.10	•	•	•	•	•	•
CV	32379	•	29.50	31.00	32.60	29.50	28.50	27.40	27.70	33.90	26.90	24.50	•	•	•	•	•	•
DM	22379	•	18.50	31.60	29.10	29.60	27.00	10.10	35.30	39.50	37.20	25.70	•	•	•	•	•	•
MM	33379	•	15.60	15.00	16.30	17.90	18.50	16.90	18.10	16.70	18.20	15.10	•	•	•	•	•	•
JA	41379	•	22.60	26.20	23.60	20.30	23.40	23.70	23.20	23.10	24.60	23.60	•	•	•	•	•	•
JB	41379	•	13.70	11.50	12.70	13.70	12.00	13.50	13.50	14.00	13.60	13.20	•	•	•	•	•	•
MM	22379	•	30.50	18.20	16.10	18.40	17.10	15.50	17.20	17.90	19.30	21.50	•	•	•	•	•	•
PM	22379	•	14.00	11.00	9.20	8.60	15.70	11.10	11.20	10.90	11.20	9.70	•	•	•	•	•	•
RE	31679	•	17.30	17.60	17.50	16.90	11.50	11.10	11.20	12.10	14.10	14.60	•	•	•	•	•	•
MEAN			23.10	21.31	20.79	20.04	23.40	19.96	21.24	21.33	21.39	22.01	•	•	•	•	•	•
SD			9.775	7.890	7.817	7.106	7.216	7.704	8.723	9.930	7.031	7.091	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-500 MSG-00 MSG/RS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	•	32.10	34.20	34.10	35.90	37.00	35.20	33.30	33.00	31.70	34.60	•	•	•	•	•	•
CV	32379	•	37.80	41.10	40.10	39.50	37.00	32.60	33.30	31.70	33.10	33.20	•	•	•	•	•	•
DM	22379	•	25.40	19.50	19.10	22.70	20.00	16.40	21.40	21.50	17.50	15.10	•	•	•	•	•	•
MM	31379	•	15.10	11.50	12.70	13.20	13.30	17.00	13.60	13.80	12.60	13.10	•	•	•	•	•	•
JA	22379	•	24.10	21.80	23.00	22.60	23.40	22.60	23.40	23.40	23.30	21.00	•	•	•	•	•	•
JB	32379	•	15.10	11.20	14.00	9.10	12.70	13.30	13.30	14.30	14.80	13.00	•	•	•	•	•	•
MM	30379	•	10.20	17.30	13.40	16.30	14.70	14.80	17.20	15.80	15.70	16.30	•	•	•	•	•	•
PM	22379	•	21.70	21.50	23.80	20.20	20.50	20.50	22.70	25.10	21.70	13.90	•	•	•	•	•	•
RE	32379	•	23.50	27.00	22.00	21.30	23.70	21.20	20.90	20.80	22.60	22.90	•	•	•	•	•	•
MEAN			24.12	27.24	22.91	22.31	23.40	23.37	22.41	21.42	21.41	22.41	•	•	•	•	•	•
SD			8.267	10.143	9.621	9.871	9.591	8.950	7.335	6.991	7.266	6.320	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-500 MSG-00 MSG/RS

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22379	•	31.20	24.50	17.30	25.60	25.60	13.00	18.20	16.40	18.30	17.50	•	•	•	•	•	•
CV	31379	•	19.00	14.20	17.10	15.90	18.00	15.10	16.20	17.60	16.50	16.50	•	•	•	•	•	•
DM	31379	•	21.40	22.10	20.50	19.40	21.70	13.80	17.20	21.10	17.90	20.70	•	•	•	•	•	•
MM	22379	•	15.60	15.70	15.60	14.80	15.70	16.30	14.80	16.00	16.50	16.70	•	•	•	•	•	•
JA	32379	•	28.00	17.60	23.40	21.70	26.10	25.00	27.20	27.10	25.00	22.60	•	•	•	•	•	•
JB	31379	•	18.10	14.60	15.40	17.10	16.10	15.30	17.20	15.90	15.90	14.40	•	•	•	•	•	•
MM	41379	•	16.00	17.80	15.90	17.40	17.40	17.50	17.10	18.70	17.30	16.70	•	•	•	•	•	•
PM	41379	•	16.20	11.10	11.70	11.10	11.10	12.40	12.90	13.30	12.50	11.40	•	•	•	•	•	•
RE	31679	•	21.30	21.50	21.70	23.10	23.10	25.50	22.60	26.00	25.50	23.90	•	•	•	•	•	•
MEAN			21.30	17.67	17.50	18.60	19.11	17.12	18.78	21.21	18.24	17.80	•	•	•	•	•	•
SD			6.110	3.863	3.673	4.274	5.179	4.712	6.108	7.674	6.319	5.729	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•



0 34 TUESDAY, JULY 24, 1979 35

AMINO ACID LEVELS UNOLIS/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS SERINE

DIET-150 MSG D058-55 MC/76

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150	180	3	4	5	6	7	8	12	24	ME
CL	37479	.	.	17.23	10.70	9.18	9.12	8.22	8.43	9.64	9.70	10.13	9.43	.	.	.	.	.	.	.
CV	32379	.	.	17.43	11.43	11.43	10.43	10.43	10.43	10.43	10.43	9.79	10.40	.	.	.	.	.	.	.
DM	22379	.	.	8.12	7.71	8.21	8.43	8.78	7.59	10.20	10.90	11.49	7.98	.	.	.	.	.	.	.
MM	34379	.	.	8.12	12.50	10.40	12.07	11.50	11.43	10.40	11.00	11.30	11.00	.	.	.	.	.	.	.
JA	41379	.	.	17.80	12.70	12.39	10.83	11.43	11.30	10.80	11.70	12.00	11.30	.	.	.	.	.	.	.
JB	41379	.	.	14.44	16.09	12.53	14.17	13.70	13.20	13.70	13.75	13.53	14.10	.	.	.	.	.	.	.
MM	22379	.	.	9.12	7.24	7.27	9.43	8.46	9.90	8.63	8.31	9.39	12.03	.	.	.	.	.	.	.
PM	22379	.	.	8.29	10.40	9.15	8.32	13.20	10.90	13.40	9.44	10.53	9.20	.	.	.	.	.	.	.
BN	31079	.	.	9.23	9.79	9.84	9.37	9.21	9.44	8.74	8.60	9.00	9.67	.	.	.	.	.	.	.
MEAN				17.45	11.73	10.20	10.27	10.43	10.40	10.30	10.34	10.84	10.30	.	.	.	.	.	.	.
SD				1.872	2.065	1.793	1.803	1.831	1.783	1.915	1.608	1.326	1.791	.	.	.	.	.	.	.
N														.	.	.	.	.	.	.

DIET-150 MSG D058-55 MC/76

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150	180	3	4	5	6	7	8	12	24	ME
CL	31379	.	.	11.40	10.43	10.43	11.17	11.30	10.43	11.30	11.09	13.40	9.44	.	.	.	.	.	.	.
CV	30279	.	.	11.70	12.33	13.30	12.07	12.00	13.00	12.10	10.70	12.03	12.73	.	.	.	.	.	.	.
DM	22079	.	.	8.50	8.87	8.48	8.28	8.23	9.47	9.40	9.25	8.45	8.99	.	.	.	.	.	.	.
MM	32379	.	.	17.30	10.70	10.83	11.07	11.30	10.70	9.00	9.18	7.22	9.99	.	.	.	.	.	.	.
JA	22379	.	.	9.45	17.25	9.44	8.51	9.13	9.13	9.23	8.10	9.10	8.80	.	.	.	.	.	.	.
JB	22379	.	.	15.43	15.37	16.09	12.74	17.43	15.40	15.40	17.30	17.75	13.30	.	.	.	.	.	.	.
MM	37479	.	.	8.12	8.49	6.79	9.28	8.40	9.20	9.44	9.94	9.45	10.30	.	.	.	.	.	.	.
PM	22079	.	.	12.30	13.33	13.30	12.30	12.90	11.40	13.40	12.59	13.40	14.10	.	.	.	.	.	.	.
BN	32379	.	.	17.14	9.54	9.54	9.44	10.50	9.62	9.30	9.28	9.47	9.22	.	.	.	.	.	.	.
MEAN				11.47	11.09	11.73	10.47	10.47	10.76	11.09	10.84	10.87	10.89	.	.	.	.	.	.	.
SD				3.724	2.184	3.007	1.822	2.091	1.444	2.844	2.761	3.136	2.331	.	.	.	.	.	.	.
N														.	.	.	.	.	.	.

DIET-150 MSG D058-55 MC/76

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150	180	3	4	5	6	7	8	12	24	ME
CL	22079	.	.	9.44	9.99	9.41	7.43	3.04	3.04	3.30	11.03	5.30	4.40	.	.	.	.	.	.	.
CV	31779	.	.	17.10	8.97	9.47	8.32	8.43	7.91	8.21	8.20	7.71	8.91	.	.	.	.	.	.	.
DM	31979	.	.	15.20	11.33	10.43	9.74	10.20	9.43	9.74	9.72	9.74	13.23	.	.	.	.	.	.	.
MM	22079	.	.	9.34	10.30	10.40	12.42	10.40	11.30	11.00	10.90	10.40	10.90	.	.	.	.	.	.	.
JA	30279	.	.	15.43	17.53	11.50	17.43	17.50	11.57	12.83	13.40	13.40	11.30	.	.	.	.	.	.	.
JB	22079	.	.	15.20	16.10	16.00	17.50	16.40	16.50	16.50	17.43	17.43	13.90	.	.	.	.	.	.	.
MM	41079	.	.	11.70	17.43	9.13	10.33	10.30	9.32	10.09	10.40	10.10	9.23	.	.	.	.	.	.	.
PM	41079	.	.	12.10	17.10	14.20	12.97	12.10	12.90	12.80	13.40	13.40	13.10	.	.	.	.	.	.	.
BN	30679	.	.	17.79	11.43	10.53	11.77	11.43	10.70	9.98	10.30	10.00	10.30	.	.	.	.	.	.	.
MEAN				11.47	11.14	10.87	10.79	11.37	10.74	10.87	11.75	13.05	10.72	.	.	.	.	.	.	.
SD				2.776	3.281	3.125	2.907	2.340	3.332	3.222	4.707	3.531	2.425	.	.	.	.	.	.	.
N														.	.	.	.	.	.	.

0 54 TUESDAY, JULY 24, 1979 37

AMINO ACID LEVELS UNOLCS/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS TAPTIME

DIET-SSB MSG 005E-53 MG/ML

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	75	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	37379	.	.	8.37	7.41	5.95	6.85	7.44	8.85	10.40	4.49	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45	4.45
CV	37379	.	.	1.30	1.54	1.37	1.34	2.27	2.80	2.79	3.07	2.43	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53	2.53
DM	22179	.	.	1.49	1.09	1.12	1.73	1.70	2.02	2.07	2.19	1.85	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
MM	37379	.	.	6.49	6.00	5.96	7.27	7.44	5.44	5.18	4.81	4.07	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
JA	41379	.	.	3.70	4.48	3.43	3.59	3.44	3.63	3.41	3.53	3.18	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
JO	41079	.	.	4.52	7.14	3.75	3.54	3.21	3.19	3.40	3.35	3.25	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15
EM	22179	.	.	4.77	7.74	6.79	4.49	4.53	3.49	3.89	2.81	3.15	8.32	8.32	8.32	8.32	8.32	8.32	8.32	8.32	8.32	8.32
PM	22179	.	.	9.70	11.00	9.53	12.11	4.24	11.90	17.99	15.40	11.10	8.76	8.76	8.76	8.76	8.76	8.76	8.76	8.76	8.76	8.76
RE	31679	.	.	7.77	1.10	1.01	2.04	1.17	1.66	1.07	4.46	2.65	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73	1.73
MEAN				6.70	5.19	4.78	5.22	4.16	4.80	5.69	4.92	4.36	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
SD				2.77	3.143	2.614	3.297	2.278	3.429	3.463	4.728	2.817	2.859	2.859	2.859	2.859	2.859	2.859	2.859	2.859	2.859	2.859
N				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

DIET-SSB MSG 005E-53 MG/ML

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	75	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	31379	.	.	6.11	4.69	6.28	6.79	6.18	5.13	4.94	4.37	7.11	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48	5.48
CV	30779	.	.	4.67	4.00	3.67	3.33	3.77	4.45	5.84	3.73	4.09	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19	4.19
DM	22879	.	.	4.45	4.88	4.71	4.70	3.74	4.61	3.54	3.54	4.11	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49	6.49
MM	37179	.	.	3.18	1.77	3.12	4.81	3.74	4.16	3.54	3.49	3.78	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43	4.43
JA	27179	.	.	4.43	1.61	3.84	4.59	3.71	4.75	3.72	3.97	4.79	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
JO	37179	.	.	2.58	1.85	1.94	5.77	2.22	6.36	1.47	2.38	2.56	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80
EM	37679	.	.	13.27	5.84	4.44	4.73	3.82	5.55	4.01	3.53	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.43
PM	27179	.	.	6.77	4.65	6.43	7.04	5.79	5.90	5.76	5.97	5.66	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16	5.16
RE	37179	.	.	6.17	6.18	6.21	6.57	6.58	6.37	5.56	5.28	5.11	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41	5.41
MEAN				4.39	4.42	4.52	5.37	4.57	5.29	4.41	4.94	4.32	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68	4.68
SD				2.716	1.343	1.545	1.244	1.561	1.079	1.344	1.425	0.994	1.381	1.381	1.381	1.381	1.381	1.381	1.381	1.381	1.381	1.381
N				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

DIET-SSB MSG APP 055E-53 MG/ML

SUBJECT	DATE	WEIGHT	TIME	3	15	30	45	60	75	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	22179	.	.	2.14	7.38	1.35	1.94	2.42	1.35	1.21	3.87	1.23	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
CV	31179	.	.	1.75	1.51	1.87	1.29	2.42	1.45	1.61	2.48	1.48	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39	1.39
DM	31179	.	.	5.98	5.74	6.71	6.47	7.40	7.16	6.32	5.44	5.36	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01
MM	22279	.	.	5.13	5.06	5.42	7.12	5.75	5.75	5.64	6.36	5.31	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82	5.82
JA	37179	.	.	6.13	1.04	6.20	5.07	4.42	3.91	3.75	3.74	3.23	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99	7.99
JO	31679	.	.	6.48	1.81	6.09	3.71	4.4	3.46	4.17	3.24	3.31	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75	3.75
EM	41179	.	.	6.23	4.71	3.68	4.95	4.20	3.93	3.44	3.78	3.87	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
PM	41179	.	.	5.11	6.47	6.53	6.40	4.44	5.01	4.49	4.31	4.48	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49	4.49
RE	37679	.	.	5.45	5.79	5.54	10.19	9.77	5.08	4.81	8.38	4.76	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33
MEAN				4.35	1.77	4.32	5.49	5.48	3.84	3.76	4.73	3.68	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33	4.33
SD				1.416	1.412	1.784	2.411	2.319	1.611	1.698	1.759	1.551	2.237	2.237	2.237	2.237	2.237	2.237	2.237	2.237	2.237	2.237
N				9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

0 34 TUESDAY, JULY 24, 1979 30

AMINO ACID LEVELS UNO/100ML

GROUP 1 OVERLAP STUD

PLASMA AMINO ACID IS THREONINE

DIET-100 D032-00 MC/100

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	10479	•	13.0	11.03	10.32	10.93	12.70	9.70	11.60	11.70	11.00	11.20	•	•	•	•	•	•
CV	32379	•	16.10	14.63	10.60	15.07	14.40	12.20	14.20	16.10	16.10	14.00	•	•	•	•	•	•
DM	22379	•	16.33	11.90	11.80	15.27	15.27	12.00	15.70	16.93	13.30	11.40	•	•	•	•	•	•
MM	32379	•	16.43	14.39	12.47	15.87	14.97	14.50	15.95	13.90	13.00	15.00	•	•	•	•	•	•
JA	41379	•	11.70	17.24	12.60	11.37	12.70	11.60	11.00	12.50	13.50	13.03	•	•	•	•	•	•
JF	41379	•	23.00	27.40	21.00	22.87	21.50	22.43	24.60	22.67	21.70	21.53	•	•	•	•	•	•
MM	22379	•	9.7	12.43	12.73	16.67	13.90	14.90	12.70	12.70	13.30	17.60	•	•	•	•	•	•
MM	22379	•	7.7	11.72	9.32	8.16	14.30	15.30	9.41	9.41	9.87	9.03	•	•	•	•	•	•
MM	31079	•	9.21	9.97	9.35	9.48	8.43	13.20	9.60	9.72	11.30	11.50	•	•	•	•	•	•
MEAN			13.52	13.64	12.71	13.29	13.03	13.48	13.01	13.01	13.03	13.09	•	•	•	•	•	•
SD			0.941	0.761	0.734	0.277	0.616	0.859	0.331	0.126	0.397	0.832	•	•	•	•	•	•
N			9	9	9	9	9	9	9	9	9	9	•	•	•	•	•	•

DIET-100 MSB D032-00 MC/100

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	31379	•	13.40	12.23	12.00	12.93	12.70	11.70	14.00	12.32	12.50	11.70	•	•	•	•	•	•
CV	32379	•	12.0	16.82	21.10	21.17	21.0	17.50	19.50	18.49	18.90	19.02	•	•	•	•	•	•
DM	22079	•	17.70	10.70	10.10	10.97	9.90	17.50	16.40	10.10	9.28	9.44	•	•	•	•	•	•
MM	32379	•	12.03	12.27	12.13	12.24	12.70	11.80	11.50	10.43	9.59	9.63	•	•	•	•	•	•
JA	22079	•	11.40	12.70	11.63	13.43	11.43	11.37	11.50	9.73	17.80	10.20	•	•	•	•	•	•
JF	32379	•	23.10	17.43	21.43	19.77	23.30	23.30	19.40	22.10	22.80	20.17	•	•	•	•	•	•
MM	32079	•	12.70	11.33	8.08	11.93	12.10	12.83	13.30	13.03	13.48	16.90	•	•	•	•	•	•
MM	22079	•	11.70	12.43	12.03	11.93	12.70	10.58	12.48	11.17	12.03	13.33	•	•	•	•	•	•
MM	32079	•	13.70	11.43	11.40	11.47	12.50	11.10	11.40	11.30	12.30	12.40	•	•	•	•	•	•
MEAN			13.30	13.23	13.01	13.27	13.73	13.42	13.41	13.40	13.51	13.30	•	•	•	•	•	•
SD			0.774	0.510	0.611	0.172	0.790	0.301	0.420	0.223	0.402	0.932	•	•	•	•	•	•
N			9	9	9	9	9	9	9	9	9	9	•	•	•	•	•	•

DIET-100 PMS AM D032-00 MC/100

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	70	120	150 MIN	3	4	5	6	7	8	12	24 HR
CL	22079	•	9.49	9.31	4.59	7.74	11.0	9.71	9.42	11.22	9.38	9.54	•	•	•	•	•	•
CV	31779	•	13.70	12.43	11.10	9.27	11.0	9.17	9.40	11.10	12.10	10.43	•	•	•	•	•	•
DM	31779	•	12.43	12.70	12.23	11.47	12.0	17.90	11.10	12.10	10.50	12.43	•	•	•	•	•	•
MM	22079	•	13.00	14.13	14.13	15.87	13.70	14.37	14.30	14.30	13.70	13.00	•	•	•	•	•	•
JA	31779	•	17.12	17.30	15.53	13.37	13.50	14.90	14.10	15.37	14.70	13.50	•	•	•	•	•	•
JF	22079	•	24.00	26.20	25.13	26.57	24.0	24.00	24.60	24.60	24.10	22.43	•	•	•	•	•	•
MM	31079	•	15.40	13.97	11.90	12.97	12.97	12.70	12.43	13.93	12.30	11.93	•	•	•	•	•	•
MM	41379	•	13.0	13.30	11.73	11.57	11.57	12.10	12.60	13.37	12.43	11.90	•	•	•	•	•	•
MM	30079	•	11.70	12.03	12.73	12.57	13.10	12.30	11.50	11.90	12.30	12.33	•	•	•	•	•	•
MEAN			16.30	16.43	13.30	13.51	14.14	12.61	13.41	14.07	13.02	12.73	•	•	•	•	•	•
SD			0.771	0.917	0.083	0.101	0.376	0.301	0.387	0.703	0.162	0.436	•	•	•	•	•	•
N			9	9	9	9	9	9	9	9	9	9	•	•	•	•	•	•

0 34 TUESDAY, JULY 24, 1979 01

AMINO ACID LEVELS UMOL/L/100ML

GROUP 1 DEVERAGE STUD

PLASMA AMINO ACID IS REPERFORMED

DIET-100 BCS-00 M2/M3

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	1	2	3	4	5	6	7	8	9	10	11	12	24 HR
CL	10/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CV	11/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	12/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	13/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEAN				5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SD				3.129	2.021	2.943	2.943	2.973	2.936	2.763	2.379	2.078	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906

DIET-100 M2S BCS-00 M2/M3

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	1	2	3	4	5	6	7	8	9	10	11	12	24 HR
CL	11/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CV	12/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	13/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	14/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEAN				5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SD				3.149	2.021	2.943	2.943	2.973	2.936	2.763	2.379	2.078	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906

DIET-100 M2S AM BCS-00 M2/M3

SUBJECT	DATE	WEIGHT	TIME	15	30	45	60	90	120	150 MIN	1	2	3	4	5	6	7	8	9	10	11	12	24 HR
CL	12/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CV	13/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	14/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
HA	15/79	-	-	5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MEAN				5.1	5.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
SD				3.149	2.021	2.943	2.943	2.973	2.936	2.763	2.379	2.078	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906	1.906

0 54 TUESDAY, JULY 24, 1979 43

AMINOGRAMS  
AMINO ACID LEVELS UNOLIS/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS TRANSISME

DIET-500 00502-00 MC/76

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	30473	.	.	6.73	4.07	5.24	4.87	4.47	3.96	3.36	4.84	5.23	5.23	5.23	.	.	.	.	.	.	.
CV	32179	.	.	5.41	5.14	5.25	4.71	4.17	4.31	4.40	4.73	4.33	4.33	4.18	.	.	.	.	.	.	.
DM	22379	.	.	8.16	4.45	6.42	5.26	5.56	4.92	6.32	6.33	6.71	6.71	4.34	.	.	.	.	.	.	.
HM	30379	.	.	6.43	6.18	4.39	5.59	5.59	5.82	5.89	5.76	6.71	5.93	5.93	.	.	.	.	.	.	.
JA	41173	.	.	5.48	4.34	5.38	5.52	5.52	6.97	4.97	4.84	5.20	4.93	4.93	.	.	.	.	.	.	.
JE	41279	.	.	7.11	4.46	6.05	6.39	6.71	6.35	6.97	6.47	6.21	5.78	5.78	.	.	.	.	.	.	.
MI	22379	.	.	5.18	4.16	4.05	5.44	4.10	4.32	4.24	4.71	4.27	5.71	5.71	.	.	.	.	.	.	.
PM	22179	.	.	4.46	4.42	5.31	5.39	5.39	3.98	3.92	3.64	3.54	3.54	3.54	.	.	.	.	.	.	.
RM	31679	.	.	4.46	4.77	4.57	6.41	6.14	6.27	4.30	4.54	5.37	5.37	5.37	.	.	.	.	.	.	.
PEAN				6.11	5.07	5.33	5.09	5.14	4.79	5.15	5.04	5.23	5.23	5.04	.	.	.	.	.	.	.
SD				1.253	2.776	0.889	0.841	0.792	0.875	1.037	0.937	1.044	1.044	0.816	.	.	.	.	.	.	.
N															.	.	.	.	.	.	.

DIET-500 MSG 00502-00 MC/76

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	31379	.	.	6.73	5.77	5.48	5.31	5.24	4.73	4.94	4.84	4.76	4.76	5.49	.	.	.	.	.	.	
CV	32779	.	.	4.89	4.36	8.01	8.25	7.73	7.33	6.45	6.10	6.02	6.13	6.13	.	.	.	.	.	.	
DM	22879	.	.	6.18	5.55	5.65	5.36	5.15	4.77	5.20	5.11	4.33	4.28	4.28	.	.	.	.	.	.	
HM	32379	.	.	5.42	6.01	6.24	6.27	6.15	6.41	4.76	4.82	4.30	4.05	4.05	.	.	.	.	.	.	
JA	22379	.	.	5.49	4.21	5.16	4.43	4.54	4.06	5.75	4.13	3.94	3.73	3.73	.	.	.	.	.	.	
JE	32379	.	.	4.21	4.21	4.34	2.84	4.74	3.88	3.29	4.01	4.35	3.20	3.20	.	.	.	.	.	.	
MI	32679	.	.	5.71	4.39	4.27	5.88	5.26	4.98	5.46	5.10	4.79	4.22	4.22	.	.	.	.	.	.	
PM	22879	.	.	6.16	5.86	5.86	4.95	6.03	4.82	5.31	4.98	4.30	4.81	4.81	.	.	.	.	.	.	
RM	32379	.	.	5.29	4.19	4.19	4.19	4.48	4.80	5.78	4.11	4.16	4.16	4.16	.	.	.	.	.	.	
PEAN				5.12	5.46	5.48	5.23	5.42	5.03	4.04	4.80	4.39	4.44	4.44	.	.	.	.	.	.	
SD				2.363	0.948	1.195	1.367	1.085	1.274	1.038	0.850	0.959	0.959	0.959	.	.	.	.	.	.	
N															.	.	.	.	.	.	

DIET-500 MSG AM 00502-00 MC/76

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	22079	.	.	5.11	3.23	4.95	6.87	6.87	8.22	3.79	7.80	3.71	3.71	3.71	.	.	.	.	.	.	.
CV	31779	.	.	4.02	6.97	8.42	7.54	7.16	5.72	5.92	6.02	5.93	5.93	5.47	.	.	.	.	.	.	.
DM	31979	.	.	7.17	1.90	11.40	11.25	12.13	9.72	9.58	8.58	6.92	7.72	7.72	.	.	.	.	.	.	.
HM	22879	.	.	5.75	5.89	6.39	7.63	7.76	6.52	6.59	6.83	6.77	6.35	6.35	.	.	.	.	.	.	.
JA	30779	.	.	6.40	4.01	8.16	6.95	8.11	6.84	6.75	6.11	5.72	5.23	5.23	.	.	.	.	.	.	.
JE	31679	.	.	7.19	8.37	8.11	8.27	7.71	7.63	7.88	7.73	7.16	6.57	6.57	.	.	.	.	.	.	.
MI	41779	.	.	6.41	6.33	5.98	6.87	6.78	6.48	4.35	6.87	5.86	5.72	5.72	.	.	.	.	.	.	.
PM	41779	.	.	5.47	4.23	14.90	6.09	7.17	7.01	7.00	6.78	6.45	6.45	6.45	.	.	.	.	.	.	.
RM	30679	.	.	5.52	7.82	7.53	7.99	8.52	7.04	6.44	6.83	7.16	6.32	6.32	.	.	.	.	.	.	.
PEAN				6.10	6.69	7.07	7.91	8.15	7.23	6.59	7.08	6.18	5.94	5.94	.	.	.	.	.	.	.
SD				0.817	2.144	2.059	1.332	1.763	1.193	1.332	0.826	1.080	1.111	1.111	.	.	.	.	.	.	.
N															.	.	.	.	.	.	.

0 34 TUESDAY, JULY 24, 1979 45

AMINOGRAMS  
AMINO ACID LEVELS UMOL/L/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS VALINE

DIET-SUB DCSC-0 NG/KG

SUBJECT	DATE	W/FIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	30679	.	.	23.80	22.20	20.50	22.10	21.10	16.40	19.70	19.90	21.20	21.40	21.40	.	.	.	.	.	.	.
CV	32379	.	.	25.50	22.80	24.20	21.60	24.10	23.10	25.80	27.80	24.50	26.00	26.00	.	.	.	.	.	.	.
DM	32379	.	.	40.70	27.30	28.60	27.50	28.60	23.50	29.60	31.10	30.10	22.30	22.30	.	.	.	.	.	.	.
MM	30679	.	.	20.40	21.60	18.70	21.20	21.00	20.20	19.30	19.10	22.00	20.00	20.00	.	.	.	.	.	.	.
JA	41379	.	.	19.50	21.90	21.70	19.40	20.50	19.70	19.70	17.70	21.30	27.00	27.00	.	.	.	.	.	.	.
JE	41379	.	.	21.00	21.10	19.70	20.10	19.0	19.20	21.70	19.40	19.90	19.40	19.40	.	.	.	.	.	.	.
MM	22379	.	.	16.60	23.10	19.50	23.20	21.50	18.80	18.70	20.20	21.40	23.60	23.60	.	.	.	.	.	.	.
PM	22179	.	.	17.40	19.10	15.90	15.60	26.70	20.90	20.20	19.70	21.30	18.30	18.30	.	.	.	.	.	.	.
RE	31679	.	.	16.50	17.00	17.20	15.90	15.0	16.00	14.80	14.90	17.70	17.70	17.70	.	.	.	.	.	.	.
MEAN				21.43	21.34	20.61	20.94	21.90	19.76	21.02	21.33	22.39	21.54	21.54	.	.	.	.	.	.	.
SD				4.723	2.844	3.912	6.142	3.995	7.581	6.316	4.743	1.494	3.313	3.313	.	.	.	.	.	.	.
N															0	0	0	0	0	0	0

DIET-SUB NSS DOSE-50 NG/KG

SUBJECT	DATE	W/FIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	31379	.	.	23.50	22.20	21.40	21.20	21.40	17.30	23.10	23.80	21.70	21.70	21.70	.	.	.	.	.	.	.
CV	30779	.	.	22.70	21.80	20.70	20.60	20.60	16.50	28.30	24.20	26.90	27.90	27.90	.	.	.	.	.	.	.
DM	22379	.	.	21.40	21.10	23.20	20.10	20.70	20.80	21.50	23.00	16.90	19.20	19.20	.	.	.	.	.	.	.
MM	32379	.	.	21.70	22.70	22.70	22.60	22.60	22.90	18.50	18.10	16.30	16.70	16.70	.	.	.	.	.	.	.
JA	32379	.	.	21.70	21.20	19.70	17.70	17.30	17.40	16.70	16.90	18.60	17.40	17.40	.	.	.	.	.	.	.
JE	32379	.	.	24.10	21.70	22.70	21.60	24.0	22.50	21.30	21.60	23.40	23.00	23.00	.	.	.	.	.	.	.
MM	30379	.	.	26.70	25.80	20.10	24.30	22.70	25.00	23.10	27.20	25.60	26.60	26.60	.	.	.	.	.	.	.
PM	22379	.	.	22.90	22.80	24.30	20.30	21.40	20.80	27.10	21.50	21.80	23.90	23.90	.	.	.	.	.	.	.
RE	32379	.	.	24.10	25.40	24.80	24.30	26.00	23.70	24.20	23.60	24.40	26.70	26.70	.	.	.	.	.	.	.
MEAN				23.49	21.38	22.62	22.77	22.80	22.94	23.13	22.10	21.96	22.23	22.23	.	.	.	.	.	.	.
SD				2.339	2.426	3.475	3.855	1.971	4.846	3.677	3.484	3.508	4.049	4.049	.	.	.	.	.	.	.
N															0	0	0	0	0	0	0

DIET-SUB MSG APP DCSE-50 NG/KG

SUBJECT	DATE	W/FIGHT	TIME	0	15	30	45	60	90	120	150	MIN	3	4	5	6	7	8	12	24	HR
CL	22379	.	.	16.70	16.70	12.50	15.10	15.10	13.80	11.60	23.40	11.20	11.90	11.90	.	.	.	.	.	.	.
CV	31779	.	.	27.10	21.90	23.40	20.70	22.10	19.50	23.70	21.30	19.90	21.20	21.20	.	.	.	.	.	.	.
DM	31979	.	.	22.70	22.90	21.50	20.00	22.60	13.80	18.80	20.70	17.20	20.70	20.70	.	.	.	.	.	.	.
MM	22879	.	.	18.50	18.00	18.20	19.20	17.10	17.60	18.10	18.50	18.70	18.90	18.90	.	.	.	.	.	.	.
JA	32379	.	.	26.50	22.50	23.40	19.20	22.60	21.90	23.70	23.70	22.10	20.30	20.30	.	.	.	.	.	.	.
JE	31679	.	.	19.70	17.80	14.00	17.10	16.50	15.00	15.80	16.70	16.20	16.80	16.80	.	.	.	.	.	.	.
MM	41379	.	.	25.50	24.60	22.60	24.50	24.50	23.90	27.10	25.90	25.60	24.10	24.10	.	.	.	.	.	.	.
PM	41379	.	.	27.10	21.40	19.80	18.90	17.70	17.10	19.00	20.00	20.20	19.60	19.60	.	.	.	.	.	.	.
RE	30679	.	.	15.70	17.30	16.70	15.80	17.70	17.70	15.00	16.00	17.10	15.80	15.80	.	.	.	.	.	.	.
MEAN				21.51	20.57	19.21	19.04	19.79	17.81	18.49	20.84	18.93	18.61	18.61	.	.	.	.	.	.	.

0 34 TUESDAY, JULY 24, 1979 47

AMINOGRAMS  
AMINO ACID LEVELS UMOL/L/100ML

SOUP & BEVERAGE STUD

PLASMA AMINO ACID IS 1/2 CYSYME

DIET-568 DOSE=0 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	10/17/79	•	9.73	9.92	7.37	7.75	7.03	6.41	9.73	11.20	11.30	9.25	12.10	10.37	•	•	•	•	•	•	•
CV	3/17/79	•	7.11	6.34	7.59	7.03	7.03	6.41	7.48	7.48	7.43	6.60	7.50	7.86	•	•	•	•	•	•	•
DM	2/17/79	•	12.60	12.60	12.30	13.00	13.00	11.40	8.24	10.49	10.60	11.10	11.10	8.92	•	•	•	•	•	•	•
HM	3/17/79	•	12.60	12.60	13.00	13.00	13.00	14.10	12.40	10.70	10.60	11.00	14.12	•	•	•	•	•	•	•	•
JA	4/17/79	•	9.55	11.00	11.00	9.44	9.44	12.70	8.73	10.60	9.77	10.70	9.12	•	•	•	•	•	•	•	•
JB	4/17/79	•	12.70	12.70	9.86	10.43	10.43	9.83	10.30	11.30	9.78	10.37	11.10	•	•	•	•	•	•	•	•
KM	2/17/79	•	8.75	8.13	8.58	10.24	10.24	9.71	8.43	8.25	7.20	9.33	12.03	•	•	•	•	•	•	•	•
PM	2/17/79	•	7.23	7.93	7.54	6.05	10.00	8.51	8.74	7.97	7.97	7.97	7.18	•	•	•	•	•	•	•	•
RM	3/16/79	•	9.77	9.13	9.97	9.65	9.65	9.49	9.73	8.68	7.72	8.02	8.55	•	•	•	•	•	•	•	•
PEAN			9.62	9.99	9.72	9.93	10.12	9.45	9.67	9.12	7.76	9.93	•	•	•	•	•	•	•	•	•
SD			1.740	2.411	1.643	2.158	1.979	1.595	1.466	1.310	1.441	2.197	•	•	•	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-568 MSG DOSE=50 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	3/17/79	•	12.30	11.10	11.40	11.40	11.40	12.00	10.40	10.40	10.10	9.88	8.07	12.43	•	•	•	•	•	•	•
CV	3/27/79	•	13.50	13.60	11.70	11.40	11.40	11.00	7.01	6.55	6.75	7.13	7.13	7.16	•	•	•	•	•	•	•
DM	2/27/79	•	11.60	13.60	10.30	10.30	10.30	11.30	11.30	11.30	10.40	9.44	8.75	•	•	•	•	•	•	•	•
HM	3/27/79	•	11.70	13.60	13.50	14.50	14.50	13.40	13.40	13.40	12.90	11.40	12.30	•	•	•	•	•	•	•	•
JA	2/17/79	•	9.18	11.20	9.55	8.34	8.34	8.73	6.80	9.22	7.89	9.14	8.05	•	•	•	•	•	•	•	•
JB	3/27/79	•	12.70	11.70	11.40	8.34	8.34	11.70	14.50	9.75	10.40	12.40	9.87	•	•	•	•	•	•	•	•
KM	3/27/79	•	7.2	9.17	8.56	8.74	8.74	12.10	12.50	11.60	13.20	12.30	12.40	•	•	•	•	•	•	•	•
PM	2/27/79	•	11.80	11.40	10.70	10.40	10.40	10.40	10.50	11.90	9.72	9.88	8.02	•	•	•	•	•	•	•	•
RM	3/27/79	•	8.52	7.44	8.37	8.61	8.61	8.78	7.46	7.77	7.57	7.89	6.96	•	•	•	•	•	•	•	•
PEAN			11.17	11.09	10.62	10.32	10.32	11.64	10.45	10.41	9.90	9.56	9.33	•	•	•	•	•	•	•	•
SD			2.187	2.375	1.639	2.359	1.586	2.578	2.307	2.246	1.731	2.353	•	•	•	•	•	•	•	•	•
N			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

DIET-568 MSG APM DOSE=50 MG/KG

SUBJECT	DATE	WEIGHT	TIME	0	15	30	45	60	90	120	150	180	3	4	5	6	7	8	12	24	HR
CL	2/17/79	•	8.11	5.75	5.17	7.34	7.34	6.58	6.45	5.59	10.57	4.83	5.71	•	•	•	•	•	•	•	•
CV	3/17/79	•	8.72	6.74	8.32	8.07	8.07	8.58	7.44	7.63	8.15	7.71	7.71	•	•	•	•	•	•	•	•
DM	3/17/79	•	11.60	11.90	9.75	10.50	10.50	9.42	10.90	9.82	9.69	9.27	8.97	•	•	•	•	•	•	•	•
HM	2/27/79	•	9.79	10.50	9.97	10.40	10.40	10.70	10.40	10.70	12.63	11.60	12.93	•	•	•	•	•	•	•	•
JA	3/27/79	•	10.70	11.10	10.30	9.30	9.30	11.70	10.40	11.30	12.10	12.40	9.61	•	•	•	•	•	•	•	•
JB	3/16/79	•	8.76	8.76	8.16	8.74	8.74	9.59	8.35	7.41	8.59	8.59	8.59	•	•	•	•	•	•	•	•
KM	4/17/79	•	8.76	11.30	9.49	10.24	10.24	8.95	10.40	11.30	10.70	9.78	8.02	•	•	•	•	•	•	•	•
PM	4/17/79	•	2.730	7.57	9.42	9.23	9.23	8.42	7.42	8.78	8.78	9.87	9.87	•	•	•	•	•	•	•	•
RM	3/16/79	•	10.60	11.70	11.50	10.75	10.75	12.40	11.50	9.70	10.50	10.70	10.70	•	•	•	•	•	•	•	•

**APPENDIX II**



**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name C. V. [redacted] Date 7/18/79

Sex W Birthdate 11/30/53

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M

Father - F

Aunt - A

Uncle - U

Brother - B

Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input checked="" type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<input type="checkbox"/>
<input checked="" type="checkbox"/> Diabetes	<input type="checkbox"/>	<input checked="" type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input checked="" type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input checked="" type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input checked="" type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below:

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>Mononucleosis</u>	<u>9/68</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> da.
<u>Cutaneous removal</u>	<u>5/72</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> da.
_____	_____	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> da.
_____	_____	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> da.

## SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input type="checkbox"/>
<input type="checkbox"/> Cataracts	<input type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input type="checkbox"/>

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name CMC Date 7/7 3/75  
Sex 1 Birthdate 3/7 5/

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M                      Father - F                      Aunt - A  
Uncle - U                      Brother - B                      Sister - S

<input checked="" type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input checked="" type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input checked="" type="checkbox"/> Stroke	<input type="checkbox"/>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input checked="" type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below:

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>12/56</u>	<u>12/56</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>6</u> mos. <u>0</u> wks. <u>0</u> ds.
<u>11/63</u>	<u>11/63</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>2</u> mos. <u>0</u> wks. <u>0</u> ds.
_____	_____	Yes <input type="checkbox"/> No <input type="checkbox"/>	_____ mos. _____ wks. _____ ds.
_____	_____	Yes <input type="checkbox"/> No <input type="checkbox"/>	_____ mos. _____ wks. _____ ds.

054

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

ou or have you ever had:

	No	Yes		No
- Frequent Eye Infections	_____	_____	Soaking Night Sweats	_____
- Double Vision	_____	_____	Tightness in Your Chest	_____
- Blurred Vision	_____	_____	Abnormal EKG (Electrocardiogram)	_____
- Pain in the Eyes	_____	_____	Fluttering of Heart	_____
- Glaucoma	_____	_____	Frequent diarrhea	_____
- Cataracts	_____	_____	Frequent Constipation	_____
- Poor Vision	_____	_____	Blood in Your Stools	_____
- Frequent Earaches	_____	_____	Black or Tarry Stools	_____
- Ringing in Ears	_____	_____	Difficulty in Swallowing	_____
- Frequent Nosebleeds	_____	_____	Frequent Heartburn or Indigestion	_____
- Frequent Headaches	_____	_____	Pain or Stiffness in Your Joints	_____
- Shortness of Breath	_____	_____	Pain or Burning on Urination	_____
- Difficulty in Lying Flat at Night	_____	_____	Difficulty with Urinary Stream	_____
- Cough or Wheezing	_____	_____	Increased Frequency of Urination	_____
- Fainting or Dizziness	_____	_____	Blood in Your Urine	_____

# SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES		NO
<input type="checkbox"/>	Birth Control Pills	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Aspirin	<input type="checkbox"/>
<input type="checkbox"/>	Antibiotics	<input type="checkbox"/>
<input type="checkbox"/>	Mineral Oil	<input type="checkbox"/>
<input type="checkbox"/>	Tranquillizers	<input type="checkbox"/>
<input type="checkbox"/>	Laxatives	<input type="checkbox"/>
<input type="checkbox"/>	Vitam	<input type="checkbox"/>
<input type="checkbox"/>	Sleeping Medicine	<input type="checkbox"/>
<input type="checkbox"/>	Sulfas	<input type="checkbox"/>
<input type="checkbox"/>	Thyroid Med	<input type="checkbox"/>
<input type="checkbox"/>	Estrogens	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Cold or Cough Medicines	<input type="checkbox"/>
<input type="checkbox"/>	Anti-Coagulants	<input type="checkbox"/>
<input type="checkbox"/>	Weight Control Medicines	<input type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

<u>Aspirin</u>	Dose	<u>1 tablet 4 times a day</u>	Duration	<u>2 weeks</u>
<u>Aspirin</u>	Dose	<u>1 tablet 4 times a day</u>	Duration	<u>2 weeks</u>
	Dose		Duration	
	Dose		Duration	

Please indicate approximate weekly intake for following:

Liquor 100% - 100% Drinks/Wk.

Beer 1 - 1 Cans or Bottles/Wk.

Wine 1 - 1 Glasses/Wk.

Cigarettes 1 - 1 Day

PHYSICAL EXAMINATION FORM

Investigator BAKER Study HAMBARGER-MILKSHAKE

Record all important positive and negative findings.

Date of Examination JUNE 13, 1979 Race C

Name ~~CHERRY, MARY ANN~~ CMC Age 28 Sex F Weight 115#

Pulse 58 Respiration 16 Blood Pressure 104/72

1. General W/D
2. Skin Normal
3. Eyes N
4. Ears N
5. Nose N
6. Mouth N
7. Throat N
8. Neck N
9. Chest and Lungs N
10. Heart N
11. Abdomen N
12. Genitalia N
13. Lymphatic N
14. Vascular N
15. Locomotion N
16. Extremities N
17. Neurological N

Serge L Baker  
Physician's Signature

057

3/02/1979 2312 HR

# PERMANENT CHART COPY

Q# : 60900

PG 1

DR: NP

NS: PED

DOB: 1/01/1952 SEX: F

ROOM: PED

NAME: ~~XXXXXXXXXXXX~~ 061  
14

## \*\*\*\*\* H E M A T O L O G Y \*\*\*\*\*

#BC	RBC	HB	HCT	MCV	MCHC	MCH	PLT
4.3-11.6	4.2-5.6	12.3-16.2	37-49	82-97	32-36	27-32	150-400
K/MM3	MIL/MM3	G/DL	%	CU.MICR	G/DL	PICO-G	K/MM3
MAR 2 6.9	4.73	13.5	39.1	83	34.6	28.6	391
0900R							

## \*\*\*\*\* B L O O D C H E M I S T R Y \*\*\*\*\*

NA	K	CL	CO2	UREA-N	CREAT	BALANCE
135-145	3.5-5.0	95-105	24-32	10-20	.7-1.4	7-20
MEQ/L	MEQ/L	MEQ/L	MMOL/L	MG/DL	MG/DL	MEQ/L
MAR 2 142	4.2	110*	19*	15	1.0	13
0900R		CKD				

T-PROT	ALB	CA	PO4	CHOL	GLUC	UREA-N	URIC
6.0-8.0	3.5-5.0	8.5-10.5	2.5-4.5	130-315	65-110	10-20	2.5-8.0
G/DL	G/DL	MG/DL	MG/DL	MG/DL	MG/DL	MG/DL	MG/DL
MAR 2 7.5	4.1	9.1	4.1	248	82	15	4.1
0900R							

LDH-T	SGOT	BILI-T	ALK-P
100-225	7.5-40.0	.26-1.00	30-115
IU/L	IU/L	MG/DL	IU/L
MAR 2 140	16	1.2*	44
0900R			

KD CHECKED

*Cmc*  
CCHES-ET-061 061

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

058

PG 1

## SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES

NO

<input checked="" type="checkbox"/> Birth Control Pills	_____
<input checked="" type="checkbox"/> Aspirin	_____
<input checked="" type="checkbox"/> Antibiotics	_____
_____ Mineral Oil	<input checked="" type="checkbox"/>
_____ Tranquillizers	<input checked="" type="checkbox"/>
_____ Laxatives	<input checked="" type="checkbox"/>
_____ Vitam	<input checked="" type="checkbox"/>
_____ Sleeping Medicine	<input checked="" type="checkbox"/>
_____ Sulfas	<input checked="" type="checkbox"/>
_____ Thyroid Med	<input checked="" type="checkbox"/>
_____ Estrogens	<input checked="" type="checkbox"/>
_____ Cold or Cough Medicines	<input checked="" type="checkbox"/>
_____ Anti-Coagulants	<input checked="" type="checkbox"/>
_____ Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

Ortho Norin Dose 1/50 Duration current

Tetracycline Dose 2 Duration 4 days in Feb.

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

Please indicate approximate weekly intake for following:

Liquor 0 Drinks/Wk.

Beer 4 Cans or Bottles/Wk.

Wine 0 Glasses/Wk.

Cigarettes 0 Day



STUDENT HEALTH SERVICES  
THE UNIVERSITY OF IOWA  
IOWA CITY, IOWA 52242

JB

76-11804

REPORT OF HEALTH EVALUATION

TO THE EXAMINING PHYSICIAN: Please review the student's history and complete the physician's form. Please comment on all positive answers. The information supplied will not affect his/her status; it will be used only as a background for providing health care. If this is necessary. This information is strictly for the use of the Health Services and will not be released without student consent.

Bardole July 481 SEX: M ☒ F ☐  
LAST NAME FIRST NAME MIDDLE

BP 122/78 Student's Social Security Number 481-72-3084  
Corrected Vision Far 20/200 20/200 20/200 20/200 64  
near Right 20/20/70 Left 20/70 20/20 Height inches Weight lbs. 119

URINALYSIS 20/20

Sugar neg  
Albumin neg  
Micro. WAL

IMMUNIZATION

	Completed		Date of Last Injection
	Yes	No	
Tetanus	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>1976</u>
Smallpox	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>1952</u>
Polio	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>should be immun</u>
Measles	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>should be immun</u>
Tuberculin Skin Test: Positive	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>8-78</u>
Chest X-ray: Positive	<input type="checkbox"/>	<input type="checkbox"/>	

Are there abnormalities of the following systems? Describe fully. Use reverse side of sheet if needed.

	Yes	No
1. Head, Ears, Nose or Throat	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Respiratory	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Cardiovascular	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Gastrointestinal	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Hernia	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Eyes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Genitourinary	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Musculoskeletal	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Metabolic/Endocrine	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Neuropsychiatric	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Skin	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Is there loss or seriously impaired function of any paired organ? Yes ☐ No ☒

Have you any general comments?

① Depigmented - abdominal  
bruited heard  
Recommend f/u exams  
& monitor of BP's.  
② Needs polio  
immunization

Recommendations for physical activity (PE, Intramurals, ROTC) Unlimited ☒ Limited ☐ Explain:  
Do you have any recommendations regarding the care of this student? Yes ☒ No ☐ follow up blood press  
Is the patient now under treatment for any medical or emotional condition? Yes ☐ No ☒

PHYSICIAN'S SIGNATURE Backstrom M.D. Return all information to:  
ADDRESS Oakdale Family Practice DIRECTOR, STUDENT HEALTH SERVICE  
PRINT LAST NAME BACKSTROM DATE 8/9/78 Children's Hospital Building  
THE UNIVERSITY OF IOWA  
IOWA CITY, IOWA 52242

RECEIVED

AUG 09 1978

STUDENT HEALTH

PERMANENT  
CHART COPY

2/23/1979 2225 HR

H# : 60938

PG 1

DR: NP

NS: PED

NAME: ~~SAROLE JUDY~~ JB

DOB: 1/01/1955 SEX : F

ROOM: RES

12

\*\*\*\*\* H E M A T O L O G Y \*\*\*\*\*

WBC	RBC	HB	HCT	MCV	MCHC	MCH	PLT	
4.3-11.6	4.2-5.6	12.3-16.2	37-49	82-97	32-36	27-32	150-400	
K/MM3	MIL/MM3	G/DL	%	CU.MICR	G/DL	PICO-G	K/MM3	
FEB 23 5.2	4.40	13.5	38.0	86	35.5	30.7	325	
0915R								

\*\*\*\*\* B L O O D C H E M I S T R Y \*\*\*\*\*

NA	K	CL	CO2	UREA-N	CREAT	BALANCE		
135-145	3.5-5.0	95-105	24-32	10-20	.7-1.4	7-20		
MEQ/L	MEQ/L	MEQ/L	MMOL/L	MG/DL	MG/DL	MEQ/L		
FEB 23 141	4.4	108*	20*	11	.9	13		
0915R								

T-PROT	ALB	CA	PO4	CHOL	GLUC	UREA-N	URIC	
6.0-8.0	3.5-5.0	8.5-10.5	2.5-4.5	130-315	65-110	10-20	2.5-8.0	
G/DL	G/DL	MG/DL	MG/DL	MG/DL	MG/DL	MG/DL	MG/DL	
FEB 23 7.2	4.0	9.7	3.7	180	95	11	4.9	
0915R								

LDH-T	SGOT	BILI-T	ALK-P					
100-225	7.5-40.0	26-1.00	30-1.5					
IU/L	IU/L	MG/DL	IU/L					
FEB 23 167	19	.4	66					
0915R								

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

061

PG 1

JUDY

**PG 1**

NAME: ~~XXXXXXXXXXXX~~  
21

IB

## PG 1

062.

04 MISCELLANEOUS REQUEST  
UNIVERSITY OF IOWA HOSPITALS AND CLINICS

ERG LAB. 0528	IMMUNOPATH LAB. RM 385 MRC	CLIN PHARMACOLOGY AND TOXICOLOGY RM 280 MRC
ATOLOGY LAB.	RADIOBIOASSY SPECIAL CHEM RM 280 - MRC	RESULTS PHONED
MONARY FUNCT.	BLOOD BANK	<input type="checkbox"/> EMERGENCY
ENDOSCOPY	THROMBOSIS LAB	<input type="checkbox"/> ROUTINE

DATE 02-24-79  
NAME ~~JUDY BARDOLE~~ JB  
ADDRESS  
AGE 24  
HOOP NO  
IND ☐ CL PAY ☐ PYT ☐ RESEARCH ☐ Q611  
ACCT NO

T: PREGNANCY TEST

SIS: NON-PREGNANT

SIGNED: [Signature]

SERVICE: PEDS

HEIGHT: WEIGHT: S.P.: DIGITALIS? QUINIDINE? OTHER?

Pregnosticon = Negative

CHART COPY  
91631



# PHYSICAL EXAMINATION FORM

Investigator

Baker

Study

Soup Beverage

Record all important positive and negative findings.

Date of Examination

3/23

Race

Cauc

Name

~~Koff, Robert~~

RK

Age

23

Sex

M

Weight

Pulse

46

Respiration

14

Blood Pressure

108/66  
RAS

1. General

W/O, W/N

2. Skin

N

3. Eyes

N

4. Ears

N

5. Nose

N

6. Mouth

N

7. Throat

N

8. Neck

N

9. Chest and Lungs

N

10. Heart

N

11. Abdomen

N

12. Genitalia

N

13. Lymphatic

N

14. Vascular

N

15. Locomotion

N

16. Extremities

N

17. Neurological

N

Physician's Signature

Berry Baker

064

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~Robert H. K.~~ R.K. Date 3/16/79  
Sex M Birthdate 2-4-56

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M                      Father - F                      Aunt - A  
Uncle - U                      Brother - B                      Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<input type="checkbox"/>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Arthritis	<u>M</u>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below

Illness or Operation	Month and Yr.	Hospitalized		If yes, how long?		
		Yes	No	mos.	wks.	day
_____	_____	Yes	No	_____	_____	_____
_____	_____	Yes	No	_____	_____	_____
_____	_____	Yes	No	_____	_____	_____
_____	_____	Yes	No	_____	_____	_____

065

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input checked="" type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>

## SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES	NO
<input type="checkbox"/> Birth Control Pills	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Aspirin	<input type="checkbox"/>
<input type="checkbox"/> Antibiotics	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Tranquillizers	<input checked="" type="checkbox"/>
<input type="checkbox"/> Laxatives	<input checked="" type="checkbox"/>
<input type="checkbox"/> Vitam	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/> Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/> Estrogens	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cold or Cough Medicines	<input checked="" type="checkbox"/>
<input type="checkbox"/> Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/> Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

Aspirin Dose 2 tablets Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

Please indicate approximate weekly intake for following:

Liquor \_\_\_\_\_ 0 \_\_\_\_\_ Drinks/Wk.

Beer \_\_\_\_\_ 0 \_\_\_\_\_ Cans or Bottles/Wk.

Wine \_\_\_\_\_ 0 \_\_\_\_\_ Glasses/Wk.

Cigarettes \_\_\_\_\_ 0 \_\_\_\_\_ Day





**PG :**

NAME: ~~MOON ROVER~~ 0611  
33

[illegible]

Q69 PG 2

# PHYSICAL EXAMINATION FORM

Investigator FILER Study SOUP / BEVERAGE

Record all important positive and negative findings.

Date of Examination 03-01-79 Race Caucasian

Name ~~John A. HIGGINS~~ JA Age 23 Sex M Weight 205 #  
190cm

Pulse 62 Respiration 14 Blood Pressure 130/78-64

RA sitting

1. General W D W N
2. Skin Clear
3. Eyes Wear glasses
4. Ears TM's OK Canals clear
5. Nose ✓
6. Mouth ✓
7. Throat sl red hypertrophied tonsils post pharynx
8. Neck Supple
9. Chest and Lungs Clear P/A
10. Heart Rate 60 No @
11. Abdomen No organs / masses
12. Genitalia ✓
13. Lymphatic ✓
14. Vascular ✓
15. Locomotion ✓
16. Extremities ✓
17. Neurological Intact

  
Physician's Signature

07C

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~Jan Anderson~~ J.A. Date March 1, 1979  
Sex M Birthdate 11-5-55

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M                      Father - F                      Aunt - A  
Uncle - U                      Brother - B                      Sister - S

<input type="checkbox"/> Allergies	<u>M, S</u>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<u>M</u>
<input type="checkbox"/> Diabetes	<u>U</u>	<input type="checkbox"/> High Blood Pressure	<u>M</u>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input checked="" type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below:

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>pyloric stenosis</u>	<u>11-55</u>	Yes <u>X</u> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> d.
<u>tonsilectomy</u>	<u>1963</u>	Yes <u>X</u> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>2</u> d.
<u>      </u>	<u>      </u>	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> d.
<u>      </u>	<u>      </u>	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> d.

071

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input checked="" type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>

# SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES		NO
<input type="checkbox"/>	Birth Control Pills	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Aspirin	<input type="checkbox"/>
<input type="checkbox"/>	Antibiotics	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Tranquillizers	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Laxatives	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Vitam	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Estrogens	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Cold or Cough Medicines	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/>	Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

2 aspirin Dose 1 day Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

\_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

Please indicate approximate weekly intake for following:

Liquor 0 Drinks/Wk.

Beer 2 Cans or Bottles/Wk.

Wine 0 Glasses/Wk.

Cigarettes 0 Day



**PERMANENT  
CHART COPY**

**HF : 61510**

**PG 1**

DR: NP

NS: PED

NAME: ~~XXXXXXXXXXXX~~ J.A.

**DOB:**

SEX : M

ROOM: RES

23

**J.A.**

\*\*\*\*\* U R I N A L Y S I S \*\*\*\*\*

[illegible]

**NEGATIVE**

UNIVERSITY OF IOWA HOSPITALS AND CLINICS

074.

RENDSEN JON

END OF REPORT

PG 1

# PHYSICAL EXAMINATION FORM

Investigator Baker Study \_\_\_\_\_

Record all important positive and negative findings.

Date of Examination 2/23/79 Race Cauc

Name ~~Pamela H. Baker~~ P.H. Age 23 Sex F Weight 108

Pulse 68 Respiration 14 Blood Pressure 102/54  
RAS

1. General N
2. Skin N
3. Eyes N contact lens
4. Ears N
5. Nose N
6. Mouth N
7. Throat N
8. Neck N
9. Chest and Lungs N
10. Heart N
11. Abdomen N
12. Genitalia N
13. Lymphatic N
14. Vascular N
15. Locomotion N
16. Extremities N
17. Neurological N

Serge Baker  
Physician's Signature

075



**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~XXXXXXXXXX~~ P.H. Date 6/16/79

Sex F Birthdate 11/27/1935

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M

Father - F

Aunt - A

Uncle - U

Brother - B

Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input checked="" type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<input type="checkbox"/>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day

076

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Poor Vision (near and far)	<input type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input checked="" type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input type="checkbox"/>

# SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES	NO
<input type="checkbox"/> Birth Control Pills	<input checked="" type="checkbox"/>
<input type="checkbox"/> Aspirin	<input checked="" type="checkbox"/>
<input type="checkbox"/> Antibiotics	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Tranquilizers	<input checked="" type="checkbox"/>
<input type="checkbox"/> Laxatives	<input checked="" type="checkbox"/>
<input type="checkbox"/> Vitam	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/> Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/> Estrogens	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cold or Cough Medicines	<input checked="" type="checkbox"/>
<input type="checkbox"/> Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/> Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

_____ Dose	_____ Duration
_____ Dose	_____ Duration
_____ Dose	_____ Duration
_____ Dose	_____ Duration

Please indicate approximate weekly intake for following:

Liquor	_____	Drinks/Wk.
Beer	_____	Cans or Bottles/Wk.
Wine	_____	Glasses/Wk.
Cigarettes	_____	Day

# MISCELLANEOUS REQUEST

UNIVERSITY OF IOWA HOSPITALS AND CLINICS

ERG LAB. 0528	CLIN PHARMACOLOGY AND TOXICOLOGY RM 260-MRC
HEMATOLOGY LAB.	RESULTS THOMAS RM 260-MRC
PULMONARY FUNCT.	BLOOD BANK
G.I. ENDOSCOPY	THROMBOSIS LAB

P.H.

23

Q611

IND. ☐ CL. PAY ☐ PVT ☐ RESEARCH ☐

REQUEST: PREGNANCY TEST

CHART COPY

SIGNED: *[Signature]* SERVICE: PED

DIGITALIST: OTHER: *[Signature]*

Pregnancy = Negative

70549

DR. NAME: *Noel*

DR. CODE: *B206*

TECH. CODE: *FIL*

ROUTINE ☒ CBC ☐  
 DIFF ☐  
 PLA ☐  
 RET ☐  
 SED ☐

2	2	1
6	3	6
0	5	4
4	0	6
1	3	2
3	9	4
0	9	7
3	2	4
3	3	3

TEST

WBC  $\times 10^3$

RBC  $\times 10^6$

HGB gm

HCT %

MCV fL

MCH pg

MCHC %

Platelets  $\times 10^3$

Retic %

ESR mm/hr

Differential WBC

Neut. Segs

Neut. Bands

Neut. Metamyeloc

Neut. Myelocytes

Promyelocytes

Blasts

Eosinophils

Basophils

Lymphocytes

Monocytes

RBC Morphology

Normal

Hypochromia

Polychromasia

Poikilocytosis

Anisocytosis

Schistocytes

Target Cells

Basophilic Stippling

Howell-Jolly Bodies

Nucleated RBC

COMMENTS:

DATE: 02-21-76

HOSP. NO.

NAME: *RAY HISSON*

AGE: 23

ADDRESS: *CARLE Q611*

U. OF I. HOSPITALS AND CLINICS - DEPT. OF  
 USE IMPRINTED STAMP PLATE ONLY 7514

# PHYSICAL EXAMINATION FORM

Investigator

Felan

Study

Simp/Bremer

Record all important positive and negative findings.

Date of Examination

03-03-79

Race

CARACAN

Name

~~Harry Hines~~ H.H

Age

21

Sex

F

Weight

57.2 Kg

Pulse

76

Respiration

16

Blood Pressure

160/80  
94/64-41

1. General

W D W N

2. Skin

Clear

3. Eyes

PERLA (pupils) EOM N

4. Ears

N

5. Nose

N

6. Mouth

N

7. Throat

N

8. Neck

N

9. Chest and Lungs

Clear P & A

10. Heart

RR no M

11. Abdomen

No organs or masses

12. Genitalia

Not Examined

13. Lymphatic

+

14. Vascular

+

15. Locomotion

+

16. Extremities

+

17. Neurological

Intact

Physician's Signature

[Signature]

080

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~James H. H.~~ H.H. Date March 3, 79

Sex Female Birthdate 09/24/57

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M

Father - F

Aunt - A

Uncle - U

Brother - B

Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input checked="" type="checkbox"/> Heart Trouble	<input type="checkbox"/> F (Rheum. Joint)
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<input type="checkbox"/>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input checked="" type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>

# SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES	NO
<input type="checkbox"/> Birth Control Pills	<input checked="" type="checkbox"/>
<input type="checkbox"/> Aspirin	<input checked="" type="checkbox"/>
<input type="checkbox"/> Antibiotics	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Tranquillizers	<input checked="" type="checkbox"/>
<input type="checkbox"/> Laxatives	<input checked="" type="checkbox"/>
<input type="checkbox"/> Vitam	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/> Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/> Estrogens	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cold or Cough Medicines	<input checked="" type="checkbox"/>
<input type="checkbox"/> Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/> Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

_____ Dose	_____ Duration
_____ Dose	_____ Duration
_____ Dose	_____ Duration
_____ Dose	_____ Duration

Please indicate approximate weekly intake for following:

Liquor \_\_\_\_\_  \_\_\_\_\_ Drinks/Wk.

Beer \_\_\_\_\_  \_\_\_\_\_ Cans or Bottles/Wk.

Wine \_\_\_\_\_  \_\_\_\_\_ Glasses/Wk.

Cigarettes \_\_\_\_\_  \_\_\_\_\_ Day



2/28/1979 2246 HR

PERMANENT  
CHART COPY

H# : 7737195

PG 1

DR: OP

NS: PED

NAME: ~~WILLIAM H. H.~~

DOB:

SEX : F

ROOM: PED

27

## \*\*\*\*\* H E M A T O L O G Y \*\*\*\*\*

	WBC K/MM3	RBC MIL/MM3	HB G/DL	HCT %	MCV CU.MICR	MCHC G/DL	MCH PICO-G	PLT K/MM3
FEB 28 0900R	6.1	4.56	13.3	37.6	83	35.4	29.2	307

## \*\*\*\*\* B L O O D C H E M I S T R Y \*\*\*\*\*

	NA MEQ/L	K MEQ/L	CL MEQ/L	CO2 MMOL/L	UREA-N MG/DL	CREAT MG/DL	BALANCE MEQ/L
FEB 28 0900R	141	4.6	102	25	15	1.2	14

	T-PROT G/DL	ALB G/DL	CA MG/DL	PO4 MG/DL	CHOL MG/DL	GLUC MG/DL	UREA-N MG/DL	URIC MG/DL
FEB 28 0900R	7.3	4.5	10.5	3.8	228	79	13	6.2

	LDH-T IU/L	SGOT IU/L	BILI-T MG/DL	ALK-P IU/L
FEB 28 0900R	183	18	.6	64

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

HOLLY

084

PG 1

**CHART COPY**

Id : 61315

PG 1

**DR: NP**

NS: RES

NAME: [REDACTED] Q611

**DOB:**

**SEX : F**

ROOM: PED

29

\*\*\*\*\* U R I N A L Y S I S \*\*\*\*\*

[illegible]

EG NEGATIVE

UNIVERSITY OF IOWA HOSPITALS AND CLINICS

AKE HOLLY 0611

END OF REPORT

085.

**PG 1**

### 6-12 COMBUSTIBLE LABORATORY RESULTS

3/0251979 2342 HR

**PERMANENT  
CHART COPY**

HF : 61315

PG 1

DR: NP

**DOB:**

**NS: RES**

ROOM: PED

NAME: ~~XXXXXXXXXX~~ 0611

29

\*\*\*\*\* U R I N A L Y S I S \*\*\*\*\*

[illegible]

EG. NEGATIVE

**UNIVERSITY OF IOWA HOSPITALS AND CLINICS**

086

AKE HOLLY Q611

END OF REPORT

PG 1



*Vanderburg Lab.*

# MISCELLANEOUS REQUEST

UNIVERSITY OF IOWA HOSPITALS AND CLINICS

EKG LAB. 0528	IMMUNOPATH LAB. RM 385 MRC	CLIN. PHARMACOLOGY AND TOXICOLOGY RM 260 MRC
HEMATOLOGY LAB.	RADIOBIOASSY SPECIAL CHEM RM 260 - MRC	RESULTS PHONED <i>Vanderburg</i>
PULMONARY FUNCT.	BLOOD BANK	<input type="checkbox"/> EMERGENCY
G.I. ENDOSCOPY	THROMBOSIS LAB	<input checked="" type="checkbox"/> ROUTINE

DATE *03-28-79*  
NAME ~~H. H. HARRIS~~ *H.H.*  
ADDRESS *IOWA CITY*  
AGE  
HOSP. NO.  
IND. ☐ IN OUT CL. PAY ☐ IN OUT PVT. ☐ IN OUT RESEARCH *Q611*  
ACCT NO.

REQUEST: *PREGNANCY TEST*

DIAGNOSIS: *NOT PREGNANT*

SIGNED *J. J. John*

SERVICE: *PDS*

FOR EKG-HEIGHT:

WEIGHT:

B.P.:

DIGITALIS?

QUINIDINE?

OTHER?

*Pregnosticon = Negative*

PG

NAME: ~~XXXXXXXXXX~~ H H.  
21

PG - 1

# PHYSICAL EXAMINATION FORM

Investigator Baker

Study \_\_\_\_\_

Record all important positive and negative findings.

Date of Examination 2/20/79

Race Cauc

Name ~~Karl B. H. H.~~ KH

Age 23

Sex M

Weight 174

Pulse 78

Respiration 16

Blood Pressure 130/76  
RAS

1. General N
2. Skin N
3. Eyes N
4. Ears N
5. Nose N
6. Mouth N
7. Throat N
8. Neck N
9. Chest and Lungs N
10. Heart N
11. Abdomen N
12. Genitalia N
13. Lymphatic N
14. Vascular N
15. Locomotion N
16. Extremities N
17. Neurological N

George L. Baker  
Physician's Signature

089

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~Kent B. Hartung~~ KH Date 2-20-79  
Sex M Birthdate 9-10-55

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M                      Father - F                      Aunt - A  
Uncle - U                      Brother - B                      Sister - S

<u>M, F, B, S</u> Allergies	_____	_____	Tuberculosis	_____
<u>B, S</u> Asthma or Hay Fever	_____	_____	Gout	_____
_____ Anemia	_____	_____	Heart Trouble	_____
_____ Cancer or Tumor	_____	_____	Stroke	_____
_____ Diabetes	_____	_____	High Blood Pressure	_____
_____ Bleeding Problem	_____	_____	Kidney Trouble	_____
_____ Epilepsy (Convulsions)	_____	<u>M</u>	Arthritis	_____
_____ Glaucoma	_____	_____	Ulcer	_____

Place a check in front of each item if you now have or have ever had any of the following:

_____ Diabetes	_____ Arthritis	_____ Yellow jaundice
_____ Hives or Skin Rashes	_____ High Blood Pressure	_____ Malaria
_____ Chest Disease	_____ Gout	_____ Venereal Disease
_____ Eye Disease	<u>X</u> Asthma or Hay Fever	_____ Polio
_____ Liver Disease	_____ Pancreatitis	_____ Dental Problems
_____ Neuralgia or Neuritis	_____ Thyroid Disease	_____ Tuberculosis
_____ Any Serious Accidents	_____ Rheumatic Fever	_____ Kidney Trouble
<u>X</u> Any Surgery	_____ Scarlet Fever	_____ Cancer or Tumor
<u>X</u> Hospitalizations	_____ Pneumonia	_____ Stroke
_____ Heart Trouble	_____ Anemia	_____ Menstrual Disorders
_____ Mononucleosis		

List Any Other Illness \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below:

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>Tonsillectomy</u>	<u>'61</u>	Yes <u>X</u> No _____	_____ mos. _____ wks. <u>3</u> day
<u>Osteomyelitis</u>	<u>6-'63</u>	Yes <u>X</u> No _____	_____ mos. <u>2</u> wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day
_____	_____	Yes _____ No _____	_____ mos. _____ wks. _____ day

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Cough or Wheezing	<input type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>

Pollenosis - Desensitized last season  
 Mold/Pollen - Not Sensitive  
 L.J. Fisher



## SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES	NO
<input type="checkbox"/> Birth Control Pills	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Aspirin	<input type="checkbox"/>
<input type="checkbox"/> Antibiotics	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Tranquillizers	<input checked="" type="checkbox"/>
<input type="checkbox"/> Laxatives	<input checked="" type="checkbox"/>
<input type="checkbox"/> Vitam	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/> Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/> Estrogens	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cold or Cough Medicines	<input checked="" type="checkbox"/>
<input type="checkbox"/> Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/> Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

Aspirin (Bayer?) Dose 2 tablets Duration PRN  
 \_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_  
 \_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_  
 \_\_\_\_\_ Dose \_\_\_\_\_ Duration \_\_\_\_\_

Please indicate approximate weekly intake for following:

Liquor \_\_\_\_\_ / \_\_\_\_\_ Drinks/Wk.  
 Beer \_\_\_\_\_ / \_\_\_\_\_ Cans or Bottles/Wk.  
 Wine \_\_\_\_\_ 0 \_\_\_\_\_ Glasses/Wk.  
 Cigarettes \_\_\_\_\_ 0 \_\_\_\_\_ Day,

2/20/1979 2303 HR

**PERMANENT  
CHART COPY**

HD : 31115:

PG 2

DR: NP  
DOB:

**SEX : M**

NS: PED  
ROOM: PED

NAME: ~~XXXXXXXXXXXX~~  
13

\*\*\*\*\* B L O O D . C H E M I S T R Y \*\*\*\*\*

[illegible]

ARTUNG KENNETH

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

093

**PG 1**

2/20/1979 2304 HR

PERMANENT  
CHART COPY

HR : 30931

PG 1

DR: Q611  
DOB:

SEX : M

NS: PEDS  
ROOM: RES

NAME: ~~XXXXXXXXXX~~ KH  
23

\*\*\*\*\* U R I N A L Y S I S \*\*\*\*\*

SG	PH	APPR	T-PROT	GLUC	KETO	BILE	BLD	UBG
FEB 20 1.016 0945R	=6	YELU CLR	NEG	NEG	NEG	NEG	NEG	NEG

WBC	RBC	BACT	CAST	CAST	REMARK	REMARK
FEB 20 0 0945R	0	NONE	NONE	NONE	NONE	NONE

\*\*\*\*\* H E M A T O L O G Y \*\*\*\*\*

WBC K/MM3	RBC K/L, MM3	HB G/DL	HCT	MCV	MCRC	MCN
FEB 20 6.2 0815R	5.3	16.3	48	91	34	31

5 NEGATIVE

RTING KENNETH

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

094 PG 1

DX <b>NOBAC</b>		<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Finish Today <input type="checkbox"/> Emergency <input type="checkbox"/> Call <input type="checkbox"/> Ext. <input type="checkbox"/> Location		<input checked="" type="checkbox"/> CBC <input type="checkbox"/> DIFFERENTIAL <input type="checkbox"/> PLATELET <input type="checkbox"/> RETIC <input type="checkbox"/> SED. RATE	
DR. CODE <b>B 2061</b>					
TECH. CODE <b>FILER</b>					
2 2		<b>PERIOD</b>		<b>OBIS R</b>	
4 8 3		TEST	Differential WBC		
0 6 6		WBC $\times 10^3$	Neut. Segs %		
5 3 3		RBC $\times 10^6$	Neut. Bands		
1 6 3		HGB gm	Neut. Metamyelocytes		
4 7 6		HCT %	Neut. Myelocytes		
0 9 0		MCV $\mu^3$	Promyelocytes		
3 0 6		MCH $\mu^3$	Blasts		
3 4 2		MCHC %	Eosinophils		
		Platelets $\times 10^3$	Basophils		
		Retic %	Lymphocytes		
		ESR mm/hr	Monocytes		
COMMENTS:			RBC Morphology		
			Normal		
			Hypochromia		
			Polychromasia		
			Poikilocytosis		
			Anisocytosis		
			Schistocytes		
			Target Cells		
			Basophilic Stippling		
			Howell-Jolly Bodies		
			Nucleated RBC		

DATE **02-20-79**

HOSP. NO.

NAME **~~XXXXXXXXXX~~ KH**

AGE **23**

ADDRESS

**CHARGE: Q611 5**

U. OF I. HOSPITALS AND CLINICS • DEPT. OF PATHOLOGY  
USE IMPRINTED STAMP PLATE ONLY 7514 2508 R 11-77

# PHYSICAL EXAMINATION FORM

Investigator Baker Study APM

Record all important positive and negative findings.

Date of Examination 2-22-79 Race Cauc

Name ~~DATA~~ D.H. Age 23 Sex M Weight 79.6 Kg  
Pulse 66 Respiration 18 Blood Pressure 128/68 8/12  
128/68 R.O.S

1. General N
2. Skin N
3. Eyes N
4. Ears N
5. Nose N
6. Mouth N
7. Throat N
8. Neck N
9. Chest and Lungs N
10. Heart N
11. Abdomen N
12. Genitalia N
13. Lymphatic N
14. Vascular N
15. Locomotion N
16. Extremities N
17. Neurological N

Baker  
Physician's Signature

096

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name ~~James H. DH.~~ Date 2/22/79  
Sex MALE Birthdate 8/12/55

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M

Father - F

Aunt - A

Uncle - U

Brother - B

Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input type="checkbox"/> Tuberculosis	<input type="checkbox"/>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input type="checkbox"/> Heart Trouble	<input type="checkbox"/>
<input type="checkbox"/> Cancer or Tumor	<input type="checkbox"/>	<input type="checkbox"/> Stroke	<input type="checkbox"/>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input checked="" type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

Has Any Other Illness VIRAL ENCEPHALITIS - 8/67

If you have checked any of the above spaces or listed any other illness, please record below:

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>ENCEPHALITIS</u>	<u>8/67</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>—</u> mos. <u>—</u> wks. <u>10</u> days
<u>                    </u>	<u>                    </u>	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>          </u> mos. <u>          </u> wks. <u>          </u> days
<u>                    </u>	<u>                    </u>	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>          </u> mos. <u>          </u> wks. <u>          </u> days
<u>                    </u>	<u>                    </u>	Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>          </u> mos. <u>          </u> wks. <u>          </u> days

# SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cataracts	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Constipation	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Poor Vision	<input type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Headaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Stiffness in Your Joints	<input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Cough or Wheezing	<input type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>



# SCREENING HEALTH QUESTIONNAIRE

**Please answer the following:**

**Are you currently taking or have you taken within the last 4 months:**

**YES**

**NO**

- ☐ Birth Control Pills
- ☐ Aspirin
- ☐ Antibiotics
- ☐ Mineral Oil
- ☐ Tranquillizers
- ☐ Laxatives
- ☐ Vitam
- ☐ Sleeping Medicine
- ☐ Sulfas
- ☐ Thyroid Med
- ☐ Estrogens
- ☐ Cold or Cough Medicines
- ☐ Anti-Coagulants
- ☐ Weight Control Medicines

[illegible]

**If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.**

Dose	Duration

**Please indicate approximate weekly intake for following:**

Liquor 0 Drinks/Wk.

Beer 1 or less Cans or Bottles/Wk.

Wine 0 Glasses/W'k.

Cigarettes 0 / Day







# PHYSICAL EXAMINATION FORM

Investigator Baker Study Soup Beverage MS6 - Department

Record all important positive and negative findings.

Date of Examination 2/20/79 Race Cauc

Name ~~CL~~ CL Age 23 Sex M Weight 150

Pulse 60 Respiration 15 Blood Pressure 120/72 <sup>5 mmHg</sup>  
118/68 RAS

1. General Normal
2. Skin N
3. Eyes N
4. Ears N
5. Nose N
6. Mouth N
7. Throat N
8. Neck N
9. Chest and Lungs N
10. Heart N
1. Abdomen N
2. Genitalia N
3. Lymphatic N
4. Vascular N
5. Locomotion N
6. Extremities N
7. Neurological N

Serge Z Baker  
Physician's Signature

102

**SCREENING HEALTH QUESTIONNAIRE**  
(CLINICAL STUDIES -- NORMAL SUBJECTS)

Name Charles C. CL Date Feb. 30, 1979

Sex Male Birthdate May 19, 1955

Place a check in front of each item if any relative has had the following:

Indicate relationship after each item using these code letters

Mother - M

Father - F

Aunt - A

Uncle - U

Brother - B

Sister - S

<input type="checkbox"/> Allergies	<input type="checkbox"/>	<input checked="" type="checkbox"/> Tuberculosis	<u>M</u>
<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/>	<input type="checkbox"/> Gout	<input type="checkbox"/>
<input type="checkbox"/> Anemia	<input type="checkbox"/>	<input checked="" type="checkbox"/> Heart Trouble	<u>U</u>
<input checked="" type="checkbox"/> Cancer or Tumor	<u>U</u>	<input checked="" type="checkbox"/> Stroke	<u>U</u>
<input type="checkbox"/> Diabetes	<input type="checkbox"/>	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/>
<input type="checkbox"/> Bleeding Problem	<input type="checkbox"/>	<input type="checkbox"/> Kidney Trouble	<input type="checkbox"/>
<input type="checkbox"/> Epilepsy (Convulsions)	<input type="checkbox"/>	<input type="checkbox"/> Arthritis	<input type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input type="checkbox"/>	<input type="checkbox"/> Ulcer	<input type="checkbox"/>

Place a check in front of each item if you now have or have ever had any of the following:

<input type="checkbox"/> Diabetes	<input type="checkbox"/> Arthritis	<input type="checkbox"/> Yellow Jaundice
<input checked="" type="checkbox"/> Hives or Skin Rashes	<input type="checkbox"/> High Blood Pressure	<input type="checkbox"/> Malaria
<input type="checkbox"/> Chest Disease	<input type="checkbox"/> Gout	<input type="checkbox"/> Venereal Disease
<input type="checkbox"/> Eye Disease	<input type="checkbox"/> Asthma or Hay Fever	<input type="checkbox"/> Polio
<input type="checkbox"/> Liver Disease	<input type="checkbox"/> Pancreatitis	<input type="checkbox"/> Dental Problems
<input type="checkbox"/> Neuralgia or Neuritis	<input type="checkbox"/> Thyroid Disease	<input type="checkbox"/> Tuberculosis
<input checked="" type="checkbox"/> Any Serious Accidents	<input type="checkbox"/> Rheumatic Fever	<input type="checkbox"/> Kidney Trouble
<input checked="" type="checkbox"/> Any Surgery	<input type="checkbox"/> Scarlet Fever	<input type="checkbox"/> Cancer or Tumor
<input checked="" type="checkbox"/> Hospitalizations	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Stroke
<input type="checkbox"/> Heart Trouble	<input type="checkbox"/> Anemia	<input type="checkbox"/> Menstrual Disorders
<input type="checkbox"/> Mononucleosis		

List Any Other Illness \_\_\_\_\_

If you have checked any of the above spaces or listed any other illness, please record below

Illness or Operation	Month and Yr.	Hospitalized	If yes, how long?
<u>Undescended Testicle</u>	<u>1960-1961</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>4-5</u> day
<u>Atopic Dermatitis</u>	<u>whole life</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> day
<u>Bicken R. Saphirel</u>	<u>July 1978</u>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> day
		Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>      </u> mos. <u>      </u> wks. <u>      </u> day

## SCREENING HEALTH QUESTIONNAIRE

CHECK THE APPROPRIATE SPACE FOR EACH OF THE FOLLOWING QUESTIONS:

Do you or have you ever had:

Yes	No	Yes	No
<input type="checkbox"/> Frequent Eye Infections	<input checked="" type="checkbox"/>	<input type="checkbox"/> Soaking Night Sweats	<input checked="" type="checkbox"/>
<input type="checkbox"/> Double Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Tightness in Your Chest	<input checked="" type="checkbox"/>
<input type="checkbox"/> Blurred Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Abnormal EKG (Electrocardiogram)	<input checked="" type="checkbox"/>
<input type="checkbox"/> Pain in the Eyes	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fluttering of Heart	<input checked="" type="checkbox"/>
<input type="checkbox"/> Glaucoma	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent diarrhea	<input checked="" type="checkbox"/>
 <input type="checkbox"/> Cataracts	 <input checked="" type="checkbox"/>	 <input type="checkbox"/> Frequent Constipation	 <input checked="" type="checkbox"/>
<input type="checkbox"/> Poor Vision	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Earaches	<input checked="" type="checkbox"/>	<input type="checkbox"/> Black or Tarry Stools	<input checked="" type="checkbox"/>
<input type="checkbox"/> Ringing in Ears	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty in Swallowing	<input checked="" type="checkbox"/>
<input type="checkbox"/> Frequent Nosebleeds	<input checked="" type="checkbox"/>	<input type="checkbox"/> Frequent Heartburn or Indigestion	<input checked="" type="checkbox"/>
 <input type="checkbox"/> Frequent Headaches	 <input checked="" type="checkbox"/>	 <input type="checkbox"/> Pain or Stiffness in Your Joints	 <input checked="" type="checkbox"/>
<input type="checkbox"/> Shortness of Breath	<input checked="" type="checkbox"/>	<input type="checkbox"/> Pain or Burning on Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Difficulty in Lying Flat at Night	<input checked="" type="checkbox"/>	<input type="checkbox"/> Difficulty with Urinary Stream	<input checked="" type="checkbox"/>
<input type="checkbox"/> Cough or Wheezing	<input checked="" type="checkbox"/>	<input type="checkbox"/> Increased Frequency of Urination	<input checked="" type="checkbox"/>
<input type="checkbox"/> Fainting or Dizziness	<input checked="" type="checkbox"/>	<input type="checkbox"/> Blood in Your Urine	<input checked="" type="checkbox"/>

# SCREENING HEALTH QUESTIONNAIRE

Please answer the following:

Are you currently taking or have you taken within the last 4 months:

YES	NO
<input type="checkbox"/> Birth Control Pills	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Aspirin	<input type="checkbox"/>
<input checked="" type="checkbox"/> Antibiotics	<input type="checkbox"/>
<input type="checkbox"/> Mineral Oil	<input checked="" type="checkbox"/>
<input type="checkbox"/> Tranquillizers	<input checked="" type="checkbox"/>
<input type="checkbox"/> Laxatives	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Vitam	<input type="checkbox"/>
<input type="checkbox"/> Sleeping Medicine	<input checked="" type="checkbox"/>
<input type="checkbox"/> Sulfas	<input checked="" type="checkbox"/>
<input type="checkbox"/> Thyroid Med	<input checked="" type="checkbox"/>
<input type="checkbox"/> Estrogens	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Cold or Cough Medicines	<input type="checkbox"/>
<input type="checkbox"/> Anti-Coagulants	<input checked="" type="checkbox"/>
<input type="checkbox"/> Weight Control Medicines	<input checked="" type="checkbox"/>

If you checked "Yes" for any of the above medicines please list names, doses (if known) and duration of therapy.

A.S. 4. Dose 5-10 drachms Duration prn  
Penicillin Dose 250mg 4x/d Duration 5 days  
Multi-Vits Dose 1 Duration prn  
Tramminin Dose 1-2, 5-10cc Duration prn  
Cislo-trimatin  
Rebi-tussin

Please indicate approximate weekly intake for following:

Liquor 0 Drinks/Wk.  
 Beer 0 Cans or Bottles/Wk.  
 Wine 0 Glasses/Wk.  
 Cigarettes 0 Day



2/20/1979 2304 HR

PERMANENT  
CHART COPY

HF : 30934

**PG 1**

DR: 0611-

**NS: PEDS**

NAME: ~~ADAM~~ CL  
23

DOB: 1/01/1956 SEX : M

ROOM: RES

\*\*\*\*\* U R I N - A L Y S I S \*\*\*\*\*

[illegible]

**: NEGATIVE**

**SON CHARLES**

UNIVERSITY OF IOWA HOSPITALS AND CLINICS  
END OF REPORT

106 PG 1

Dx. <b>NORMAL</b>		<input checked="" type="checkbox"/> Routine		<input checked="" type="checkbox"/> CBC	
DR. CODE <b>B206</b>		<input type="checkbox"/> Final Total		<input type="checkbox"/> DIFFERENTIAL	
TECH. CODE <b>FILED</b>		<input type="checkbox"/> Emergency		<input type="checkbox"/> PLATELET	
		Call Ext. <b>1</b>		<input type="checkbox"/> RETIC	
		Location		<input type="checkbox"/> SED. RATE	
2 2 0					
4 8 0		TEST	Differential WBC <b>08202</b>		
0 5 0		WBC $\times 10^3$	Neut. Segs	%	
4 9 7		RBC $\times 10^6$	Neut. Bands		
1 5 0		HGB gm	Neut. Metamyelocytes		
4 3 7		HCT %	Neut. Myelocytes		
0 8 6		MCV $\mu^3$	Promyelocytes		
3 0 3		MCH $\mu\text{g}$	Blasts		
3 4 4		MCHC %	Eosinophils		
		Platelets $\times 10^3$	Basophils		
		Retic %	Lymphocytes		
		ESR mm/hr	Monocytes		
			RBC Morphology		
			Normal		
			Hypochromia		
			Polychromasia		
			Poikilocytosis		
			Anisocytosis		
			Schistocytes		
			Target Cells		
			Basophilic Stippling		
			Howell-Jolly Bodies		
			Nucleated RBC		
COMMENTS:					

DATE **02-20-79**

HOSP. NO.

NAME **~~CHARLES LARSEN~~ CL**

AGE

ADDRESS

**CHARGE Q611 b**

U. OF I. HOSPITALS AND CLINICS - DEPT. OF PATHOLOGY

USE IMPRINTED STAMP PLATE ONLY 7514 2508 R 11-77