It will be observed that the mean rainfall for October given in Table A is but little less than that for March, thus bearing out the statement made by Dr. Hann that the duration of the dry season for places lying on the Algerine coast is but five months. The average number of fair days in the course of a year at Algiers is two hundred and thirty-three. The prevailing wind for the year is the northwest, which frequently blows with great violence. The west is the rain-bearing wind, and is the one which is of commonest occurrence in the winter season. North and northeast winds are those which blow most frequently during the spring and summer months. The sirocco, taking its origin over the heated sands of the great Sahara desert, is most commonly felt at Algiers during the hot season, at which time it is greatly dreaded. This wind, blowing from the southeast, occurs somewhat less frequently during the colder months, at which season it is far less oppressive, and is more easily borne. The sirocco at Algiers is always a dry wind; it is accompanied by clouds of dust, a portion of which, consisting of extremely fine particles of sand, it brings with it from the great desert. Dust, it may be remembered, is one of the pests of the Algerine climate; in great part it is of purely local origin, the character of the soil and the heat of the sun, together with the almost constant prevalence of wind, favoring rapid evaporation of the rainfall, and the rainfall itself occurring chiefly in the form of heavy and not very protracted showers A fall of snow at the city of Algiers itself is an extremely rare phenomenon, in the elevated country back from the coast, known as the Hauts Plateaux, snow falls quite frequently, and at times to a considerable depth. The water supply of the city of Algiers is abundant. Concerning the character of the water, the writer has no exact information; but from the absence of adverse comments in the works of the various authors consulted, he deems it probable that it possesses no deleterious qualities.

The mildness of its winter climate, together with the moderate percentage of relative humidity in the atmosphere, and the great preponderance of clear skies and of bright, sunny weather, which it enjoys at all seasons, combine to render Algiers a desirable, pleasant, and beneficial place of residence during the winter and early spring months, for invalids suffering from pulmonary phthisis and from certain other affections of the respiratory system. For such cases its climate is recommended by Lombard, Rochard, and Weber. The last-mentioned writer speaks of the climate as exercising also a beneficial influence upon chronic diarrhœas and upon the sequelæ of dysentery.* Lombard specifies chronic bronchitis, asthma, and phthisis as diseases likely to be benefited by a sojourn at Algiers, and he calls attention to the remarkable immunity from pulmonary phthisis enjoyed by the native population, as well as by the soldiers of the French army stationed in Algeria. This immunity is greater upon the seacoast than it is on the higher ground lying farther inland. The writer on Algiers in Eulenburg's "Encyclopädie" speaks, on the contrary, in very unflattering terms both of the climate of the city and of its desirability as a winter residence for invalids. He lays great stress upon the variability of the climate and its liability to sudden changes of weather, and warns all invalids who are unpleasantly affected by such changes, all asthmatics and persons subject to attacks of diarrhœa, rheumatism, and intermittent fever, that they would do well to avoid the place. How far the unfavorable comments of this writer may be justified, the writer is not in a position to know from personal experience, but, judging from the meteorological data quoted from reliable sources in the present article, and from the favorable comments made by Lombard and other writers of repute, he deems it not improbable that the contributor of the article in Eulenburg's "Encylopädie" has overestimated the unpleasant features of the Algerine climate.

Huntington Richards.

[Dr. Charles Theodore Williams, in "Aëro-Therapeutics," 1894, speaks as follows from his personal experience:

"Of the dozen consumptive patients of whom I have notes who have wintered once or oftener at Algiers, the large majority improved greatly, and number at least two cases of arrest; but I note that the greatest improvement took place where patients resided in villas with gardens, and not in hotels. In one case, where a young lady, a member of a very consumptive family, developed the disease and a considerable cavity had formed in one lung, complete contraction of the cavity took place with arrest of the disease in two winters, and the lady has since married and has resided for the last nineteen years in England without any signs or symptoms of relapse. Another lady, with well-marked tuberculosis of one lung, spent two winters in a villa at Mustapha Supérieur, with the result that the disease became arrested, and since that date she has been able to pass twelve winters in Scotland with impunity."

Strictly speaking, no moderately moist, warm marine climate like Algiers can be considered especially curative for phthisis, except on Dettweiler's general principle that phthisis can be cured in any climate where there is pure air and a freedom from dust and wind. Undoubtedly, such a climate has its value for certain cases of phthisis of low vitality and nervous irritability, and also for those patients who are unable to adapt themselves to the climatic conditions of the high resorts.

Such a climate is also valuable for patients with chronic bronchitis, and with emphysema, and for those who are in the early days of convalescing from pneumonia. *E. O. O.*]

ALHAMBRA SPRINGS.—Jefferson County, Montana
POST-OFFICE.—Alhambra

ACCESS.—Via Northern Pacific or Great Northern Railroad. Hotel.

These springs are located fifteen miles from Helena, at a level of 3,786 feet above the sea, the surrounding country being broken and mountainous. A dry and salubrious climate, with varied and picturesque scenery, characterizes this region. The hills and mountains are covered by different varieties of pine, fir, and cypress, while the bottoms are dotted with groves of alder, willow, mountain ash, poplar, and other trees. Many varieties of plants have been found in the neighborhood, which, it is said, have never yet been classified. Game is still abundant, consisting of grouse, pheasants, deer, elk, mountain lions, and a few bisons. The springs are situated in an angle formed by the junction of two creeks, in which mountain trout abound. They are twenty-two in number, and vary in temperature from 90° to 134° F. A complete analysis has never been made, but Dr. Stein, the proprietor, supplies the following partial qualitative analysis made by himself:

Sodium carbonate,	Lithium carbonate,
Potassium carbonate,	Sodium chloride,
Calcium carbonate,	Potassium sulphate.

One spring is said to be strongly chalybeate, while another is heavily impregnated with fluoride of calcium. We are unable to classify the waters by the above analysis A sufficient quantity from some of the springs produces mild purgative effects in most people.

Dr. Stein states that the internal use of the waters is markedly advantageous in cases of chronic articular rheumatism, and in other disorders for which the Carlsbad waters of Bohemia have become famous. Mild attacks of albuminuria usually disappear, and even advanced cases of Bright's disease are benefited. Abundant facilities for hot and cold bathing, with a plunge and swimming bath, are provided. *James K. Crook.*

* Chronische Bronchitis, besonders mit Reizhusten, Emphysem, Ueberreste von Pneumonie und Pleuritis und Phthisis im ersten Anfang bilden das geeignete Material; auch chronische Diarrhöen und Folgezustände von Dysenterien sind geeignet (Ziemssen's Handbuch der allgemeinen Therapie, Bd. ii., S. 80).

ALHUELICAN SPRING.—Situation, west of the city of Tehuacan, capital of the district of the same name, in the state of Puebla, two and a half kilometres from Tehuacan. Transportation, by way of the Mexican Southern Railroad.

Chemical composition (Dr. F. Villaseñor):

Hydrometric degree	52°
Hydrometric degree after boiling	30°
Solids.	Gm. per Litre.
Sulphate of lime	0.0770
Sulphate of magnesia	0.2875
Carbonate of lime	0.2215
Carbonate of earthy salts	0.5860
Chloride of sodium	0.1675
Traces of iron, inorganic matters, silica, and undetermined substances, differential	0.0845
Saline residue dried at 120° C	0.8380
Total	2.2620
Gases at 0° and at 0.76° C.	
Gases.	c.c.
Carbonic acid	27.730
Oxygen	13.499
Nitrogen	36.600
Total	76.829

USES.—The composition of these waters being similar to that of the Carlsbad waters, they have been employed in the treatment of the same conditions, and more particularly for the relief of cholelithiasis; and from time immemorial they have enjoyed a great reputation in the treatment of the latter condition. Several physicians recommend them highly, but perhaps the one who has done most to generalize their use is Dr. D. Mejia, professor of internal medicine in the Medical School of Mexico. Dr. Martinez Frey, resident practitioner in Tehuacan, prescribes them in the following manner:

From 120 to 160 gm. per dose four times a day as follows: the first, on an empty stomach, lukewarm; the second at 10 A.M.; the third at 5 P.M.; the fourth at bedtime. All these doses are to be taken in small mouthfuls, the patient furthermore being at liberty to take them at meal times as well, under certain restrictions. An excessive use of the water is to be avoided. By pursuing this method and by regulating the patient's diet, Dr. Frey has brought about many cures within periods varying from three to four months.

During the first few days the water has a purgative effect, but the system rapidly acquires tolerance for it, to such an extent indeed that in spite of its composition it serves as the drinking water of Tehuacan, where the inhabitants generally enjoy good health and are long-lived.

It appears that its prolonged use tends to produce constipation.

Among the inhabitants of Tehuacan, cholelithiasis is of rare occurrence, a circumstance which may perhaps be attributed to the fact that they never drink any other water. *N. J. Ponce de Léon.*

ALICANTE.—Spain. This city of 36,000 inhabitants lies upon the shore of the bay bearing the same name, on the eastern or Mediterranean coast of Spain, and about forty miles south of the middle point of that coast (lat. 38° 20′ N., long. 0° 30′ W.). Extending in the form of a crescent along the northern shore or head of the bay, and dominated by a rocky hill, some four hundred feet high, the town is tolerably well sheltered from the north and northwest winds, the bay being open only to the westerly winds. "The landward environs are dreary," says Baedeker; "but the distant mountains, the castle, the harbor, and the sea combine to form a memorable picture." "The view from the east mole of the harbor," continues the same authority, "with its white, flat-roofed houses, its palms, and the bare and tawny cliffs of the castle hill, has probably no parallel in Europe."

The climate is a mild and dry one, drier than the Riviera, the annual rainfall being only 16.93 inches, of which (according to Lorenz and Rothe, quoted by Dr. Weber, in Ziemssen's "Handbook of General Therapeutics") 20.7 per cent., or the extremely small quantity of 3.5 inches, falls during the winter months. The percentage of clouds prevailing in the sky of that portion of Spain in which Alicante is situated is much lower than is found in any other part of Europe, Italy and Greece included. The relative humidity of Alicante the writer has not been able to ascertain; but at Valencia, some eighty-five miles north of Alicante, the mean yearly relative humidity is 66°, and it is probably somewhat less at Alicante. The mean annual temperature is 64.4° F.; that of winter being 53.5° F. Another authority gives the mean winter temperature as 60° F. There is no mistral or dust.

The present condition of the water supply is not known to the writer; it is probably the same as when Dr. Bennet wrote of it in 1875, which consisted then of a large spring and rain water tank. The accommodations are said by Dr. Weber to be good. The wine of Alicante is famous, and, besides a large commerce, the town possesses an extensive tobacco factory, which employs four hundred Spanish girls.

Dr. Weber speaks from personal experience of a few cases of arrested phthisis without pyrexia doing well here during a sojourn of several months. When a mild, dry, and sunny climate is considered desirable for early pulmonary tuberculosis. Alicante would seem admirably to fulfil these conditions. Cases of latent scrofula, asthma, bronchorrhœa, albuminuria, and rheumatism are also said to do well here. *Edward O. Otis.*

ALIMENT.—Food or aliment is matter which, in conjunction with the air, supplies the elements necessary for the maintenance, growth, and development of the organism, and is thus the source of the power on which the vitality of the organism is dependent—*i.e.*, the source of the heat, mechanical work, and other forms of energy liberated in the body. Hence, in the broadest sense, true aliment is a mixture of food stuffs and drink, together with the air, from which comes the oxygen necessary for the oxidation of the former and by which energy is liberated. Again, physiologically considered, true aliment, especially in the animal kingdom, is to be distinguished from so-called "food" as being only that portion of the food which is either directly available for absorption, or convertible by the digestive juices of the body into soluble and more or less diffusible products, capable of being absorbed by the blood and lymph.

The food of vegetable organisms is quite different from that of animal organisms. Moreover, the nature of the processes involved is likewise quite different.[1] The vegetable organism, by a synthetical process—a building up of more complex bodies from simpler ones—derives its nourishment from the inorganic world; its cells appropriate such of the inorganic principles as are needed for its growth, and convert them under the influence of the sun's rays into organic compounds which enter into its own structure.

The animal organism, on the other hand, does not possess this power, and thus we look to the creative power of the vegetable kingdom as the source, either directly or indirectly, of the aliment of animals. Moreover, the vegetable matter which thus serves as food not only furnishes the material necessary for the growth and life of the organism, but it contains, in addition, stored up within its molecules, a certain amount of latent force derived from the solar force originally used in its construction.

Animal organisms, by a process of transformation quite the reverse of synthetical, convert the preformed animal or vegetable organic matter into allied or simpler forms, which are absorbed into their own tissues. Animal food, approximating more closely in composition with the body to be nourished by it, is perhaps more easily appropriated, and probably with less expenditure of energy, than vegetable products. Animal food, moreover, possesses stimulating properties, due, without doubt, to the crystalline nitrogenous bodies contained in muscle serum. Organic matter once entered as a part of an animal organism and applied to the purposes of life is decomposed or broken apart, and its decomposition products are ultimately reconverted into inorganic principles. There is thus a complemental relationship between vegetable and animal life and the inorganic world. The plant, by a selective action, appropriates as an element of nutrition certain kinds of mineral matter, together with nitrogen in the form of ammonia and nitrates, from the soil in which it grows, at the same time drawing from the air carbon in the shape of carbonic acid, while hydrogen and oxygen are supplied to an unlimited extent in the form of water. The vegetable products thus formed serve in turn as the food of animals, while the latter at every breath pour forth carbonic acid and water, which ultimately find their way again, more or less modified, into the tissues of plants. These, together with the nitrogenous excreta, products of the metabolism of life, and the post-mortem decompositions which follow, continually serve in their variously modified forms as agents by which the conservation and transference of energy is accomplished.

Now, since food is the source from which the various elements of the body are supplied, it is evident that to fulfil its purposes food must contain all of the elements present in the body. These are, of course, not free, but in a state of combination, for it is only in the latter case that they are of service as food, and, as Pavy remarks, "the combination must have been formed by the agency of a living organism—the combination must, in other words, constitute an organic product." Aside from the elements which appear as inorganic salts, there are in the body at the most but six elements, two of which are present only in small quantity and are apparently less important. These six elements are carbon, hydrogen, nitrogen, oxygen, sulphur, and phosphorus. Any substance which as food is to satisfy the requirements of life, must contain at least the first four of these six elements, in addition to inorganic salts and water.

The alimentary products found in nature can be separated by chemical analysis into several well-defined substances, none of which are usually found free in nature. These chemically distinct substances are termed the alimentary principles. Many of them are found in both animal and vegetable foods, as, for example, certain fats and some forms of proteid matter, although in the case of the latter example there would appear to be some few minor points of difference both in percentage composition and in chemical reactions between the corresponding substances of animal and vegetable origin. Others are to be found only in one kingdom, as starch in the vegetable, or collagen, the gelatin-forming substance, in the animal.

Various classifications of food have been from time to time proposed, based mainly upon either physiological or chemical grounds. Popularly, aliment is frequently divided into food and drink, without, however, any suitable reasons, since the mere fact of a food being in solution does not preclude the possibility of the presence of even a large amount of solid matter, as, for example, in the case of milk; while, on the other hand, butcher's meat contains on an average sixty to seventy-two per cent. of water. Hence food should be considered as including both liquid and solid matter. The most natural and comprehensive classification of foods is that based primarily on chemical composition and origin, viz., organic and inorganic—that is, chemical combinations of elements producible chiefly through the agency of living cells; and secondly, inorganic compounds absorbed from the mineral kingdom, and thus intimately mixed with the former. The inorganic portion of food consists simply of water and various saline compounds. The organic portion may be advantageously subdivided into two groups, nitrogenous and non-nitrogenous, based mainly on the presence or absence of the element nitrogen. The nitrogenous alimentary principles, represented chiefly by proteid or albuminous substances, contain carbon, hydrogen, oxygen, and nitrogen combined in varying proportions, and generally also small quantities of sulphur and frequently of phosphorus. The non-nitrogenous principles contain only the three elements, carbon, hydrogen, and oxygen. These are in turn further subdivided, according to the relative proportion with which the carbon and hydrogen unite with oxygen—viz., into fats and carbohydrates; the former consisting of carbon and hydrogen united to only a small amount of oxygen, as in the case of tripalmitin, $C_{51}H_{98}O_6$; the latter of carbon, with the hydrogen and oxygen always in such proportion as to form water, as in the case of cane sugar or saccharose, $C_{12}H_{22}O_{11}$; hence the name carbohydrates. These two divisions of the non-nitrogenous principles not only differ in percentage composition, but they are likewise widely divergent both in chemical and in physical properties. Following is a partial classification of foods:

- 1. INORGANIC.
  - (a) water.
  - (b) salts.
    - calcium sulphate and phosphate.
    - magnesium sulphate.
    - potassium chloride, phosphate, and carbonate.
    - sodium chloride, phosphate, and carbonate.
    - iron salts.
    - silica, fluorine.
- 2. ORGANIC.
  - (a) non-nitrogenous.
    - fats.
      - tristearin. tripalmitin. triolein. — animal and vegetable.
    - carbohydrates.
      - amylaceous. — starches. gums. dextrins. cellulose.
      - saccharine. — grape sugar. cane sugar. milk sugar. maltose.
  - (b) nitrogenous.
    - gelatinous principles.
      - collagen. chondrigen. gelatin.
    - albuminous principles.
      - albumin. fibrin. syntonin. globulin. — animal and vegetable.
      - nucleo-proteids. casein. elastin, etc.
    - amido-acids and nitrogenous bases.
      - asparagin. creatin. leucin, etc.
      - xanthin. hypoxanthin, etc.

Examination of this classification leads us first to notice the importance of water[2] as food. According to Voit,[3] the body of a fully developed man contains 63 per cent. of water, while the body of a growing child contains nearly 66.5 per cent. Any great alteration in the content of water in the animal body is always attended with disastrous results; thus, in diarrhœa, cholera, etc., such large quantities of water are lost as to render the blood quite thick, and even the muscles may lose as much as six per cent. of water. Such loss, if long continued, soon results in loss of vitality and consequent death. It is noticeable, moreover, that a certain proportion of the water contained in the tissues of the body can be removed without difficulty, while a smaller, residual portion, apparently more closely united to the organic matter, can be separated only with great difficulty; this is well illustrated in the simple drying of dead muscle tissue. Removal of the water from low forms of animal life, by drying them at the ordinary temperature, or at a temperature below the coagulating point of their body protoplasm, causes them to lose all appearance of life; but in such condition they will again absorb the water lost, and return to their former appearance and vitality. Increase of water in the organism beyond the normal amount is usually associated with an unhealthy condition of the body. Various investigators have likewise demonstrated that there is a close connection between the percentage of water in the body and the diet, irrespective of the water taken as drink. Thus Voit has shown that a bread diet, continued for some time, renders the body more watery than normal. In one experiment with a cat, the amount of water in the brain and muscles was increased three to four per cent. Increase of fat in the body is usually attended with a diminished percentage of water.[4] A vigorous, well-nourished man possesses organs much poorer in water than a badly fed person. Forster[5] has figured that under normal conditions a person living on an average diet takes daily from 2,215 to 3,538 gm. (about 6.5 pounds avoirdupois) of water. It is easy to see, however, that a great variety of circumstances, as variations of diet, exercise, temperature, etc., may have a modifying influence on the amount of water taken into the system during the twenty-four hours. The figures just given do not, however, represent all of the water, since a variable amount is formed within the body by oxidation of the hydrogen contained in the organic alimentary principles. Thus, according to Voit, in the case of a hungry man, 32 gm. of hydrogen in the form of organic matter were oxidized to 288 gm. of water during twenty-four hours.

It is thus plainly evident from the foregoing that water is a necessary constituent of the body, and as one of the alimentary principles is a decidedly important one; yet we need to understand its true significance. It does not itself undergo any chemical change, and is not a source of energy, though it aids chemical change in supplying, by its presence, a condition absolutely necessary for its occurrence in other bodies.

The inorganic salts, as Pavy remarks, "stand, if not to the full extent, nearly so, in the same position as water, as regards the non-possession in itself of force-producing properties." The mineral matters are more closely concerned in the structure of the organism than in the liberation of energy, and this is true both of animal and vegetable organisms. Further, inorganic salts appear to play an important part in regulating and controlling in some measure the various metabolic processes of the body, although they themselves contain little or no potential energy. They are particularly necessary in the developing animal body, and of all the forms of mineral matter none is so important and so widely distributed as calcium phosphate. This salt is seldom, if ever, absent from any structural element of the body, and its intimate union with many of the nitrogenous principles, particularly the albuminous bodies, is so decided that only with the greatest care can this salt be completely removed without changing the nature of the albuminous body;[6] indeed, in many cases there would appear to be a chemical combination between the proteid body and the inorganic salt. Mineral matter is needed not only for the growth and nutrition of the skeletal portions of the body, but it is also needed in the structure of the softer tissues, as well as in the formation of secretions; thus, the acid of the gastric juice has its origin in the chlorine of sodium chloride, or common salt, while the alkalinity of the pancreatic secretion, as well as that of some of the other fluids of the body, is due mainly to inorganic salts, as the alkali phosphates and perhaps bicarbonates. Moreover, the removal of carbonic acid by the lungs, through the agency of the venous blood, could hardly be accomplished were it not for the alkalinity of that fluid. In many juices of the body, inorganic elements are held not only in solution, but quite firmly united with the more characteristic matter, as in the sodium salts of the bile acids, and in some instances they can be removed only by decomposition of the compound. The excess of salts taken into the body, by the food or other means, and that which becomes free by decomposition within the body, is easily removed through the urine and fæces.

There is still other evidence that the various inorganic salts of food serve definite purposes in the body. The two alkalies, potash and soda, so widely distributed and so closely allied in their chemical properties, cannot be made to replace each other in the living organism, while the same is likewise true, to a certain extent, of the alkali earths, lime and magnesia. Thus a qualitative, and also a quantitative, selection of inorganic matter is noticeable in the body, particularly in the blood, where the corpuscles contain the greater portion of the potassium salts and phosphates, while in the serum, sodium salts and chlorides are in excess. Again, it is quite noticeable that potassium salts predominate in the formed tissues of the body, while sodium salts are characteristic of the fluids.

Forster's[7] experiments on pigeons with food poor in salts, and on dogs with powdered meat from which the greater portion of inorganic matter had been removed by extraction with hot water, fat and carbohydrates being afterward added, showed that these animals could not bear the loss longer than four to five weeks without great suffering, and, finally, death. In fact, it is evident, from physiological experiment, that an organism supplied with all organic food stuffs and water can live only for a limited time without mineral matter For a time the body draws upon the inorganic matter stored up in its own tissue;[8] but this failing, and that naturally present in the organic foods being removed, death soon results from lack of inorganic aliment.[9] In the ordinary diet of men and animals, sufficient salts are generally contained in the non-nitrogenous and proteid foods to furnish the required amount of mineral matter. As to the actual quantity of inorganic matter needed to counterbalance that withdrawn from the body in twenty-four hours, we can hardly say. The content of ash contained in the smallest amount of food necessary to keep up the vitality of an organism would give an approximate answer to this question. This Bischoff and Voit attempted to ascertain by experimenting with a dog weighing 31 kgm. (68.3 pounds), the daily food in this case containing 6.5 gm. (gr. 100.3) of ash. The excretion of mineral matter, however, as Voit has pointed out, is quite different in the hunger condition from what it is during a plentiful diet; for, in the case of hunger, the inorganic matter of the organs is drawn upon, the salts passing into the excreta, thus keeping the percentage composition of these fluids for a time constant.

The importance of iron, or iron salts, as aliment, is hardly second, certainly not in the case of the higher animals, to lime salts. The position which it occupies in the hæmoglobin molecule, on which the blood depends for its power of carrying oxygen, would alone indicate this. Boussingault[10] has determined the amount of iron in a sheep of 32 kgm. weight to be 3.38 gm., = 0.151 per cent.[11] It is to be borne in mind, however, that much of the iron taken as food is consumed in the form of organic compounds, as in hæmoglobin, ferruginous nucleo-proteids, nucleins, etc.[12]

The following table[13] shows the amount of inorganic constituents present in some foods, the figures expressing parts per one hundred of the *dry* substance:

	K_2O	Na_2O	CaO	MgO	Fe_2O_3	P_2O_5	Cl
Beef	1.66	0.32	0.029	0.15	0.020	1.83	0.28
Wheat	0.62	0.06	0.065	0.24	0.026	0.94	?
Potato	2.28	0.11	0.100	0.19	0.042	0.64	0.13
White of egg	1.44	1.45	0.130	0.13	0.026	0.20	1.32
Peas	1.13	0.03	0.137	0.22	0.024	0.99	?
Human milk	0.58	0.17	0.243	0.05	0.003	0.35	0.32
Yolk of egg	0.27	0.17	0.380	0.06	0.040	1.90	0.35
Cow's milk	1.67	1.05	1.510	0.20	0.003	1.86	1.60

Of the non-nitrogenous foods, the fats which, according to the old-time classification of Liebig, come under the head of respiratory or calorifacient principles, are particularly applied to the production of heat and other forms of energy. They also appear to be concerned, to a certain extent, in tissue development. The neutral fats alone are important as foods. The free fatty acids and glycerin are seldom present in sufficient quantity to have any significance. The more important fats are tristearin and tripalmitin among the solid, while among the more easily melting fats triolein is the chief representative. These are simply neutral compounds, formed by the union of a triatomic alcohol, glycerin, with three molecules of a monatomic fatty acid. The fluidity of a fat depends on the amount of olein present; thus, beef fat, which contains more palmitin and stearin, melts at 41° to 50° C., while goose fat, which contains large quantities of olein, melts at 24° to 26° C. The following