PROCESS CHEESE

by

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Process Cheese

The Legislature of 1925, facing a problem of fundamental importance, by legislative act defined and standardized process cheese in the following terms:

"Process cheese is the food product produced by mixing, blending and uniting with the aid of heat, cheese of one or more lots of different quality, make, flavor, age, size, weight, shape, of like or different milk fat or moisture content, so as to produce a uniform mass readily makable into desired forms, shapes, sizes, and weights; and may contain added seasoning, added harmless coloring matter, harmless emulsifying agents as disodium phosphate, sodium citrate, sodium and potassium tartrate or mixtures of the same or other harmless emulsifying chemicals in quantities not exceeding three per cent; and contains in the water-free substance not less than fifty per cent of milk fat; and process American cheese not more than thirty-nine per cent of moisture with an allowance or tolerance of one per cent in excess, so that in no case shall the moisture content of said process American cheese exceed forty per cent; and process Brick cheese not more than forty-two per cent of moisture with an allowance or tolerance of one per cent in excess, so that in no case shall the moisture content of said process Brick cheese exceed forty-three per cent; and process Emmenthaler cheese or process domestic Swiss cheese shall contain not more than forty per cent of moisture with an allowance or tolerance of one per cent in excess so that in no case shall the moisture content of said process Emmenthaler cheese or process domestic Swiss cheese exceed forty-one per cent; except that process Emmenthaler cheese or process domestic Swiss cheese shall contain in the water-free substance not less than forty-three per cent of milk fat."

An epitome of the struggle resulting in this legislation, and a characterization of conditions disclosing the need of National regulation as well, is set forth in a document prepared, in collaboration, by the dairy and food commissioner of Wisconsin and the assistant dairy and food commissioner and chief chemist, and presented by the latter to the National Joint Committee on Definitions and Standards at Washington, D. C., January 18, 1926. Because of its vital importance, that document is published in full in this bulletin and follows:

We understand that you have under consideration the matter of definition and standardization for a food product produced by mixing, blending and uniting with the aid of heat, cheese of one or more lots of different quality, make, flavor, age, size, shape, of like or different milk fat or moisture content, so as to produce a uniform mass readily makable into desired forms, shapes, sizes and weights, that may contain added seasoning, added harmless coloring matter, harmless emulsifying agents, as disodium phosphate, sodium citrate, sodium and potassium tartrate, or mixtures of the same, or other harmless emulsifying chemicals in specified limited quantities, with the end in view, of establishing its proper and just relation to other articles of food within the jurisdiction of the National Food and Drugs Act.

The knowledge we have to contribute as to the public necessity of establishing such just relationship of this food product to other foods, and to the public, is the outgrowth of experience.

On the 30th of March, 1921, a chemist employed by a leading producer of the article under consideration, called at the office of the Dairy and Food Commissioner at Madison, Wisconsin, for a conference in relation to its production in the State of Wisconsin. As a result of that conference, he was requested to submit the matter in the form of a written communication, which he did under date of March 31, 1921, to wit:

"Dairy and Food Division,
Madison, Wis.
Gentlemen:—

"In accordance with our conversation of yesterday (March 30th) I am putting before you the essential factors of manufacture of our 5 lb. loaf American Cheddar Cheese.

"This product is made from the finest grade Wisconsin full cream American Cheddar Cheese.

"The cheese is milled, then pasteurized in large kettles devised for this purpose.

"During the above pasteurization the aroma of the cheese is lessened, in order to regain this in the final product a small amount of butter (between 5 and 6 percent) is added before pasteurization.

"In order to reduce the high fat test resulting from the addition of butter and also to obviate the formation of rancid flavor, a small amount of skim cheese (about 9 percent) is added before pasteurization.

"The final product meets the food laws for full cream cheese in every state in the union.

"This cheese to be manufactured at Plymouth, Wis. and sold under contract to Armour & Co.

"We realize that it may not be possible for you to give a final statement on this proposition under the circumstances, in that event we shall be entirely satisfied to get your opinions and support in connection with the manufacture of this product in the State of Wisconsin."

Under date of June 15, 1921, I returned the following answer:

"You submit to me the following: Is a product made from 'full cream American Cheddar cheese' milled, then pasteurized with between five and six per cent of butter added thereto during the period of pasteurization with the addition of about nine per cent of skim milk cheese added before pasteurization American Cheddar cheese within the terms and meaning of the Wisconsin laws relating to that subject. Subsection 9 of Section 4601—4a of the Wisconsin statutes as amended by Chapter 48 of the laws of 1921 provides as follows:

'Cheese is the sound, solid, and ripened product made from milk or cream by coagulating the casein thereof with rennet, pepsin, or lactic acid, with or without the addition of ripening ferments and seasoning or added coloring matter and contains in the water-free substance, not less than fifty per cent of milk fat and cheese known as American or Cheddar cheese not more than thirty-eight per cent of moisture.

'Skim milk cheese is the sound, solid, and ripened product, made from skim milk by coagulating the casein thereof with rennet, pepsin, or lactic acid with or without the addition of ripening ferments and seasoning.'

'Skim milk is milk from which a part or all of the cream has been removed and contains not less than nine per cent of milk solids.'

"Section 4607c of the Wisconsin statutes provides:

'Any person who shall by himself, his agent or servant manufacture, buy, sell, offer, ship, consign, expose or have in possession for sale, within this state any skimmed-milk-cheese, or cheese manufactured from milk from which any of the fat originally contained therein has been removed except such last mentioned cheese is ten inches in diameter and nine inches in height, shall be punished as therein provided.

'Full cream American Cheddar cheese' mentioned in your letter is defined by the first definition quoted above. That is the article that under the Wisconsin laws may be legally manufactured and sold as cheese, American or Cheddar cheese.

"When any skimmed milk cheese is added to the above specified cheese, American or Cheddar cheese, the resulting article can no longer be classed as cheese, American or Cheddar cheese, under the terms of the Wisconsin law. The Wisconsin statute does two things, it defines and it also standardizes cheese. 'Cheese' to come within the terms of the law must comply both with the definition and with the standards thereof. If cheese, American or Cheddar cheese is milled, then pasteurized, it probably still remains cheese, American or Cheddar cheese, but when to cheese, American or Cheddar cheese there is added skim milk cheese in any quantity the resulting article does not come within the terms of the definition of cheese as American or Cheddar cheese.

"If the butter fat content of cheese, American or Cheddar cheese, is reduced therein by the addition of skim milk cheese, and to the resulting product there is added butter fat for the purpose or with the effect of bringing the butter fat content up to the minimum standard prescribed by law, it is my opinion that the product no longer comes within the terms of the definition of cheese, American or Cheddar cheese. From this presentation of the case it is manifest that in my opinion your inquiry must be answered in the negative.

"The product you describe it seems clear to us requires classification among the compounds.

Very truly yours,

(Signed) J. Q. EMERY,

Dairy and Food Commissioner."

The statements in this letter were made in answer to, and upon the representations made in the letter answered. Considerable time elapsed without any reply, or further comment, being received from the chemist or the company employing him.

The Legislature of Wisconsin of 1917 had enacted a law making it unlawful to manufacture for sale, exchange, sell, etc., any cheese which contains more than the permitted amount of moisture as provided in subsection 9 of section 4601—4a of the statutes. Subsection 9 is the definition and standard for cheese. At the same time the Legislature amended the standard for cheese, fixing a maximum permissible moisture content for cheese known as American or Cheddar cheese at 40 per cent. Experience with this moisture law demonstrated that the moisture content of

40 per cent for American cheese was too high, and the Legislature, in 1921, reduced the permissible maximum moisture content of American or Cheddar cheese to 38 per cent. The Legislature of 1919 fixed a maximum permissible moisture content for cheese known as brick cheese at 42 per cent.

It was the provisions of this specific statute that unavoidably brought the challenge to the cheese product under consideration. Was this cheese product in truth and in fact American cheese under the terms of the statute, or cheese "*known* as American cheese?" If so, then it was amenable to the moisture content law, and if in its manufacture, it could not be kept within the moisture content fixed by the law, it would be an outlaw in the State, for the jurisdiction of this law extended not merely to the sale, etc., of the article in question, but to its manufacture in the State as well. Analyses of several samples of cheese of this type at about this time, or just previous, disclosed the fact that the product under consideration contained as high as 43, and even 44, per cent of moisture.

The question, therefore, as to its correct classification, under the law, became paramount, and it is today a fundamental question as to its classification when shipped in interstate commerce. Certain it is, under the existing Wisconsin laws, it could not be considered American cheese for the purpose of sale, and *not* American cheese in the matter of manufacture. To determine the correct classification of this food product under existing laws, the actual facts as to its production became necessary. We found the route to this goal by no means clear and easy. A condition of affairs seemed to us to prevail suggestive of the elusive ball in the shell game. The article was found to be labeled and sold as American full cream cheese. We, therefore, held that the article was known as American cheese and that its manufacture or sale in Wisconsin, if it contained more than 38 per cent of moisture was unlawful. In other words, that as it was known as American cheese, it must comply with the Wisconsin law relating to its manufacture and sale.

In the application for letters patent, filed March 14, 1919, Serial No. 282645, containing specification of letters patent and process for treating cheese, one of the chief objects of the invention was therein stated to be to provide a process

whereby lack of uniformity in composition, flavor, moisture, condition of age, etc., is eliminated, and a blended product produced, which may readily be made to conform to the provided standards, etc. A claim in the application of this producer of this product for patent was for the application of the "process" to an admixture of a predominating quantity of Cheddar cheese, with a minor proportion of another variety, and further to provide a "process" for converting ordinary commercial cheese into cheese especially adapted to stand relatively high temperatures for extended periods without becoming spoiled. This tended to confirm that the food product in question was comparatively "new" and "different" from cheese. The application for a patent stresses throughout the patenting of a "process." It seems that when this application was made, the term process was not regarded by its applicant, in its relation to this product, as stigmatizing.

In correspondence, as hereinbefore mentioned, with a leading producer of this article, the article under consideration was referred to as a comparatively new article, in an experimental stage. A further claim was made that the public have placed this article in a class by itself, and consider it a different cheese, and, again, there should be a distinct line drawn in your thinking on this proposition between the regular American and Cheddar cheese and _____ loaf cheese. The public do not think of them in the same way. Yet it was labeled and sold to the consumer for American cheese, but, apparently, in its relation to the Wisconsin law, dealing with the moisture content of cheese known as American cheese, it was to be considered something new, something different. These were some of the perplexing conditions confronting us. Agitation arose by regular producers of American cheese, and others, as to the unfair and ruinous competition of this article with which they were confronted, which challenged attention.

When, under date of August 23, 1922, I announced to the producer of this food product, with whom correspondence had been carried on, that I was thoroughly convinced that this product was being manufactured and sold in violation of the laws of the State relating to such products, and that I had reached the conclusion that if this practice continued,

it would be my duty as Dairy and Food Commissioner of Wisconsin to contest the legality of its manufacture and sale in Wisconsin, the president of the company, his manager and chemist, promptly called upon me at the office of the Dairy and Food Commissioner for an interview. As a result of this interview, and for the purpose of more conclusively settling the legal status of the product in its relation to the Wisconsin law, I stated that I would submit the matter to the Attorney General, based upon his contention and representation as to the constituent elements and the processes involved, and that I would submit a carbon copy of my communication to the Attorney General to him for any correction of erroneous statements I might make; and this I did.

In response, I received from him a communication, in which he stated:

"In the main, I feel that you have stated the situation accurately and clearly. I wish, however, to stress several points in connection with the letter and which I feel should be made a little clearer to the Attorney General, for I feel he will not be as familiar with the subject of cheese as you are. In this he claimed that the food product in question is in a class by itself, that the public has placed this article in a class by itself and consider it a "different" cheese; that there should be a distinct line drawn in your thinking on this proposition between the regular American or Cheddar cheese and _____ loaf cheese; that the public do not think of them in the same way.

"Further, as to whether the processes have the effect to change the character or classification under the law of Wisconsin, this, of course, is a technical legal question, and should be looked at from the standpoint of the public rather than from the standpoint of the law. The character of the product is changed by pasteurization; the texture is changed by the blending; the character of the keeping quality is changed by the boxings, and for these three reasons, if for no other, _____ cheese as a product is distinct. Again, inasmuch as no foreign substance is added, and because of the fact that the best average make of cheese we can obtain in the State of Wisconsin is used, and not to the extreme extent as referred to in the second paragraph of your letter are different grades and qualities used, we do not see how such a query could arise."

It is not to be overlooked in this connection that this producer of the food product in question, approving my letter to the Attorney General as having stated the situation accurately and clearly, particularly stressed the proposition that *no foreign substance was added.*

The paragraph he refers to in my letter is as follows: "Further, the query arises whether such 'blended' (as suggested) article under the terms of the general law on adulteration, calls for setting forth on the labels a statement of the true character and composition of the article as a compound or mixture."

The opinion of the Attorney General was prepared by his deputy, Mr. Ralph M. Hoyt. The facts as he understood them to be stated to him as the basis of an official opinion were set forth in that opinion as follows: "It appears that the cheese in question is made, or rather placed in its final form for the market by ---------- at Plymouth, Wisconsin. Their process consists in taking cheeses manufactured by other concerns and grinding, mixing, pasteurizing and reshaping them into loaves. The various cheese thus blended or mixed into the final form are of different grades and quality, but are all of the same general type, that is, either American, Swiss or Brick. NOTHING IS ADDED TO OR TAKEN FROM THESE CHEESES IN THE ---------- PROCESS; the operation simply blends them together and places them in a distinctive loaf form, in which they are sold to the public."

It is to be noticed that the Attorney General's opinion was based upon the facts *as stated,* and the accuracy of his conclusion or statement, as thus stated, is dependent upon the accuracy of the statement as to the constituents and processes involved in the production of the food product in question. Whether or not the statement as given to the Attorney General at that time as to the constituents then used, was or was not correct, certain it is, that investigation since made, confirmed by admissions, disclose that the product under consideration, is not always limited to the cheese of one single variety but is at times, admittedly composed of two or more varieties, labeled and sold as being the product of a single variety.

Not long after the opinion of the Attorney General had been received, rumors were afloat that a certain C. C. salt, whatever that might mean, was in general use by the producers of the food product under consideration. Litigation was consequently delayed for further investigation to ascertain the accuracy or inaccuracy of the statements upon which the Attorney General's opinion had been rendered. That water was generally added by the producers of this product, in addition to the normal moisture of the original cheese, became a well established fact, and that the product could not be produced without added water. Several inspections were made by representatives of the Wisconsin

Dairy and Food Department, but no discovery of the mysterious "C. C. salt" was made until Mr. Klueter, Chief Chemist and Assistant Commissioner, was sent to the plant of one of the producers of the product under consideration. Following is his report of this special investigation:

As a result of close observation at the factory it was noted that what appeared to be salt from more than one barrel was added to each of the kettles during the process of manufacture. It may be added that the barrels were not side by side. When this fact was called to the attention of the man in charge of the cook room, as it was called, he remarked, "I wondered if you were going to pass this matter up." The two substances, which appeared to be salt, were then examined as to their crystal form, taste, etc., and it was readily ascertained that the one substance was not cheese salt, nor dairy salt. When asked what the salt other than cheese salt, or dairy salt, was, the man in charge of the cook room stated that this salt was referred to as C. C. salt in the plant and that he did not know the composition of the same. He then offered some explanation as to the use of so-called C. C. salt in the production of their product, stating that, with very few exceptions, it was necessary to use so-called C. C. salt in their process so as to produce the proper texture and body and for the further reason that it prevented the product from becoming grainy or gritty. Samples of the product, to which an insufficient amount of the so-called C. C. salt had been added, were exhibited, and it was pointed out that the grainy appearance of the product was due to the fact that not enough of the so-called C. C. salt had been used. When asked what use could be made of cheese of this character to which insufficient so-called C. C. salt had been added, he stated that limited quantities could be added to different kettles in the process of manufacture and thus used up. In this way a sufficient quantity of C. C. salt would be introduced. He made reference to the fact that with an aged, well cured, well broken down American cheese, very little of the C. C. salt, or possibly no C. C. salt would be required. But in my inspection of the cheese going into the product on that occasion, I found no aged and well cured American cheese being used.

Samples of the two kinds of salt used were obtained and analyzed. One proved to be cheese salt (dairy salt), and the so-called C. C. salt proved to be rochelle salts, or sodium and potassium tartrate. Several samples of salt submitted by people about to engage in the manufacture of the product under consideration, or actually engaged in the manufacture thereof, have, upon analysis, been found to be mixtures of rochelle salts and sodium citrate. Other samples proved to be sodium citrate, and still other samples disodium phosphate. Investigations at other factories disclosed the use of disodium phosphate as an emulsifying agent and at one of the larger factories it was found that sugar (sucrose) was being added in liberal quantities. At practically all of the factories it has been admitted that it is necessary to use added water in starting the process of emulsification, together with an emulsifying chemical. It was also observed that in the manufacture of the so-called American type, added cheese color is used.

It is deemed fitting at this point to describe, and discuss the character of cheese used, and the manner of assembling so-called batches. It has been represented at various factories that in order to produce a good marketable product, it is necessary that a certain amount of rather high class cheese be used. The first act by the manufacturers of the product under consideration is, therefore, to grade the cheese when bought, so that it may be used according to grade. In the manufacture of American type, a certain percentage of high class cheese, together with definite percentages of lower grade cheese, are assembled on trucks in lots of about 300 to 350 pounds, constituting what later in the process comprises a so-called batch, consisting of cheese of different age, different flavor and different texture. This cheese is then passed over a table at which men remove the coating of paraffine and bandages and any defects noticeable, such as moldy spots or contaminated or otherwise damaged portions. The product thus prepared is passed through comminuting machines, and this comminuted product is then transferred to the emulsifying kettles. The process of emulsification is started with the addition of water and emulsifying chemicals and the temperature is gradually increased. Occasionally it is found necessary to

replace water lost by evaporation. This illustrates the simplest and perhaps the highest type of manufacture of the product under consideration.

An investigation of one of the plants engaged in this business was made on complaint, and samples taken at the plant. The investigation disclosed large quantities of skim milk cheese curd on hand and in use, and the use of butter. The samples obtained, upon analysis, were found to be of the following composition:

American

Percent Moisture	44.91
Percent Solids	55.09
Percent Fat	25.35
Percent Ratio Fat to Solids	46.01

American

Percent Moisture	45.68
Percent Solids	54.32
Percent Fat	22.79
Percent Ratio Fat to Solids	41.95

Brick

Percent Moisture	48.19
Percent Solids	51.81
Percent Fat	19.10
Percent Ratio Fat to Solids	36.86

It was this condition of affairs, together with criminating and recriminating stories afloat in regard to practices, as well as an unmistakable demand by producers of Swiss cheese, especially, that brought about legislation on this matter. Legislation of the most drastic character was proposed and urged, in which such varied proposals as designating it as embalmed cheese, filled cheese, renovated cheese, remade cheese, made over cheese, were vigorously pressed on the one hand, while on the other hand suggestions were made for designations that would in no way differentiate it from the regular cheese, such as loaf cheese, sandwich cheese, package cheese, blended cheese, pasteurized cheese, although it was conceded by reputable producers of the ar-

ticle, that it cannot be truthfully said that pasteurization is always effected in the process of production.

The cook in a Plymouth establishment of a leading producer of the food product under consideration, has admitted that if the article under consideration be produced from gassy cheese or cheese having yeasty fermentations, the finished product is likely to have similar fermentations, a statement conclusively refuting the contention that pasteurization is always effected in the process.

This definition should be broad enough not to exclude such cheese as comes within the other provisions of the definition, but does not happen to be pasteurized. Further, it is urged that the word pasteurization is descriptive of a single operation, usually applied to such natural articles as milk, cream or finished products.

The Dairy and Food Department was frantically besought to interpose efforts to establish the status of this new product in relation to the old long established and well known product cheese, either by outright prohibition or by adequate regulation. The demand for outright prohibition was by no means small. Hence it followed that the first problem to be solved was, was this new process of such beneficial character to the public, and to the cheese industry as a whole, to entitle it to sincere support and protection if properly regulated; or was it so detrimental to the public interest, and to the cheese industry as a whole, as to call for its extinction. Long, painstaking investigation, independent in character, resulted in conviction that the former was the befitting attitude.

In the clash of opinion, it was forcefully pointed out, that the manufacture of the type of product under consideration had an unjustifiable advantage over the regular, well established cheese dealer, in that he was enabled to take, without serious objection, liberal quantities of off grade or inferior cheese, which he was able to use in the manufacture of this product, eventually selling it under the slogan "good cheese made better." This advantage becomes more apparent by an understanding of the manner in which cheese is purchased. Competition in the purchase of cheese is keen, and in order to insure success as a dealer, it is necessary to secure volume. Therefore, contracts are made with

cheese factories to take the season's output of their product, and because of this keen competition, a cheese factory producing a considerable portion of low grade cheese, if criticised by the dealer, has no trouble in finding another market for his product. It will be seen that the dealer having an outlet for a large quantity of inferior grade cheese is in a position to control the output of a large number of factories, and it was this fact, together with the anticipation that this product ultimately would be recognized, that induced the establishment of factories in Wisconsin. The rights and interests of the public and of the cheese industry alike demanded a just solution of this problem.

Convinced that regulative, rather than prohibitive measures, were the fitting ones for adoption, the question of a truthfully descriptive name, definition and standard, became one of first importance. As has been indicated, there were those who, in the attempted solution of this problem, besought a name that should give the product and the industry a black eye, while, on the contrary, there were those who wanted no action whatsoever, and still others who wanted to give it a euphemistic name, not truthfully descriptive and differentiative. No question is settled until it is settled right.

In the various patents for the production of the food product under consideration, special processes for its production have been strongly featured, apparently not deeming the word "process" in that connection as stigmatizing. It cannot be truthfully gainsaid that this product is obtained through a special process.

The Wisconsin law on this subject as passed by the Legislature was prepared by the State Dairy and Food Department, except that the hyphenated term "special-process cheese" was employed to designate the article as the most truthfully descriptive and fair to all interests of any name suggested or proposed. It is a warning to the public that it is what one of its leading producers frequently asserts, something new, something different. It is likewise equally protective of the dairy industry, which has the inherent right of protection against fraudulent or unfair competition. The Assembly saw fit to strike out the word "special" and the hyphen, and the Senate, in the closing days of the

session, convinced that legislation of a regulative character was imperatively demanded, concurred in the Assembly enactment, and though while the bill was pending in the Legislature its terms were generally approved by producers of the product as having been intelligently drawn and as fair and liberal to the "new", the "different" product, there were those who contended that though regulation is imperatively needed, yet this matter was so wide in its scope that it should become the subject of Federal regulation and that unless so regulated, manufacturers with factories in other states might very well discontinue the manufacture of the product in this State, carrying on their operations entirely outside of the State and thus be in a position to take advantage of those who had their money invested in factories in this State only. This condition became one of the most forceful arguments against and the most serious obstacles to the passage of the bill.

The definition and standard of cheese, both State and National, has been quoted as the sound, solid, and ripened product made from milk or cream by coagulating the casein thereof with rennet, pepsin or lactic acid, with or without the addition of ripening ferments and seasoning or added coloring matter, etc. To contend that an article produced by grinding together cheeses of different grades, adding more than the permissible amount of water thereto, changing by heat, and injecting into it chemicals not in themselves deleterious, but taking to themselves additional water, and taking the place of so much genuine cheese, effecting a change in body or texture and flavor, among the most important of cheese characteristics, I say that so to contend is to do violence to thought, language and truth. Terms truthfully descriptive of each of these cannot be synonymous. To ship in interstate commerce or sell such an article as American or Cheddar cheese, or for such a product to be exploited upon the public under the names long applied to products that have been defined and standardized, is to mislead the public and to be an injustice to the cheese industry.

Nor is this product under consideration always made from cheese as defined and standardized by law, but, to the contrary, often contains either unripened cheese or un-

ripened skimmed cheese. The result of the "process" admittedly employed, is to prevent further ripening of the product. Therefore, any unripened cheese used does not retain the inherent properties of breaking down into the products found in normally ripened or aged cheese.

Moreover, unless regulated, "wild catting" in this "new", this "different" industry, judged by our experience, becomes a serious menace to this "new" this "different" industry itself, as well as to the regular cheese industry. To produce and sell as brick cheese a mixture of Limburger, Brick and American cheese, to produce and sell as Swiss cheese a product composed of Swiss and American cheese, to produce and sell as American cheese a product produced from American and Swiss cheese or American pimento, practices that cannot be honestly and truthfully denied or gainsaid, is dishonest, and an injustice to the public.

With the maximum moisture content of cheese known as American cheese established by law at 38 per cent, with the maximum moisture content, likewise, of Brick cheese at 42 per cent, a minimum butter fat content for all cheese except domestic Swiss at 50 per cent in the water-free substance, and the further fact that cheese, except domestic Swiss and the product under consideration, manufactured in Wisconsin, has an average milk fat content of 52 per cent or over as shown by chemical analyses of numerous samples of regular cheese as to moisture and butter fat content, it becomes scarcely less than axiomatic, that some befitting legislative regulation was an imperative necessity. Attached to this communication is a tabulation showing moisture and butter fat content of samples of the food product under consideration as determined in our laboratory at Madison.

Either this food product under consideration is or is not something different from that from which it is produced, viz., cheese. It cannot consistently and legitimately, at the same time, be one and the same thing, namely cheese, and still be something new, something different, from cheese. One of the most fundamental principles laid down and adhered to by the courts as to food regulation, is that the public, whatever may be its prejudice, its ignorance, or its in-

telligence, has a right to be truthfully informed as to the character and constituents of the food it consumes.

This communication was prepared by the undersigned in collaboration.

(Signed) J. Q. EMERY,
Dairy and Food Commissioner of Wisconsin,

(Signed) HARRY KLUETER,
Chief Chemist and Assistant Dairy and Food Commissioner.

Complete Analyses of Kraft's American and Kraft's Brick Cheese, Submitted by the Winnebago Cheese Company, Fond du Lac. Wisconsin

	American	Brick
Moisture	37.85%	39.68%
Solids	62.15%	60.32%
Ash	3.64%	4.51%
Salt from Ash	1.25%	2.13%
Fat	32.55%	31.27%
Protein	23.09%	23.21%
Other Constituents by Difference	2.87%	1.33%
R. M. Number on Fat	28.40	26.90
S. B. R. 40° on Fat	44.0	44.3

ANALYSES OF PROCESS CHEESE

Date	Insp. No.	Brand	Percent Moisture	Percent Solids	Percent Fat	Percent Ratio F. to S.	
6- 4-20	16a H. C. L.	Kraft Elkhorn	38.81	61.19	30.00	49.02	Babcock
7- 6-20	177 A. M.	Kraft's Old English	29.73	70.27	33.30	47.38	Babcock
2- 4-21	69 W. W.	Kraft American	43.45	56.55	28.95	50.3	Babcock
3-28-21	18 J. M. K.	Kraft American	38.10	61.90	31.50	50.8	Babcock
12-27-21	217 A. M.	Kraft American	36.22	63.78	31.65	49.9	Babcock
3-31-22	45 J. J. W.	Kraft American	42.08				
3-31-22	46 J. J. W.	Kraft American	42.02	57.98	29.25	50.44	Babcock
4-10-22	136 W. W.	Kraft American	44.05	55.95	27.83	49.74	Mojonnier
4-11-22	137 W. W.	Kraft American	43.62	56.38	28.72	50.94	Mojonnier
4-12-22	368 G. H. S.	Kraft American	44.89	55.11	27.31	49.55	Mojonnier
4-22-22	325 C. J. K.	Kraft American	39.16	60.84	29.93	49.19	Mojonnier
4-24-22	326 C. J. K.	Kraft American	41.97	58.03	29.38	50.62	Mojonnier
4-28-22	147 L. R. S.	Kraft American	42.70	57.30	28.95	50.52	Mojonnier
10-25-22	145 W. W.	Phoenix American	39.10	60.90	30.63	50.29	Mojonnier
10-25-22	146 W. W.	Kraft American	40.70	59.30	30.42	51.29	Mojonnier
11- 7-22	190 L. R. S.	Phoenix American	38.53	61.47	30.44	49.53	Mojonnier
11- 7-22	191 L. R. S.	Kraft American	39.43	60.57	31.48	51.97	Mojonnier
12- 5-22	Winn. Ch. Co.	Kraft American	37.85	62.15	32.55	52.37	Mojonnier
12- 5-22	Winn. Ch. Co.	Kraft Brick	39.68	60.32	31.27	51.84	Mojonnier
5- 3-23	173 W. W.	Kraft American	43.17	56.83	28.50	50.14	Babcock
7-17-23	265 L. R. S.	Kraft American	38.65	61.35	31.50	51.30	Babcock
7-17-23	266 L. R. S.	Armour's Veribest	38.92	61.08	31.50	51.50	Babcock
7-17-23	267 L. R. S.	Kraft American	40.09	59.91	31.05	51.60	Babcock
7-17-23	268 L. R. S.	Kraft American	40.69	59.31	31.50	53.10	Babcock
7-17-23	269 L. R. S.	Phoenix American	37.77	62.23	31.50	50.61	Babcock
7-17-23	270 L. R. S.	Phoenix American	38.01	61.99	31.80	51.30	Babcock
7-17-23	271 L. R. S.	Phoenix American	38.25	61.75	31.50	51.00	Babcock
7-17-23	272 L. R. S.	Phoenix American	39.45	60.55	31.80	52.50	Babcock
7-30-23	187 W. W.	Pabst American	42.02	57.88	28.58	49.29	Mojonnier
7-30-23	188 W. W.	Pabst Swiss	43.25	56.75	26.10	45.99	Babcock
7-30-23	189 W. W.	Pabst Brick	43.90	56.10	25.04	44.63	Mojonnier
8-11-23	191 W. W.	Kraft Brick	41.25	58.75	29.31	49.80	Mojonnier
10- 1-23	300 L. R. S.	Kraft American	39.14	60.86	31.50	51.70	Babcock
1-24-24	315 L. R. S.	Sheb. Prod. Golden Cream	35.55	64.45	32.58	50.50	Mojonnier
1-24-24	316 L. R. S.	Sheb. Prod. Golden Cream	39.95	60.05	28.36	47.22	Mojonnier
4-22-24	389 L. R. S.	Kraft American	40.83	59.17	31.10	52.56	Mojonnier
4-22-24	390 L. R. S.	Brookshire American	40.63	59.37	29.17	49.13	Mojonnier

ANALYSES OF PROCESS CHEESE—Continued

Date	Insp. No.	Brand	Percent Moisture	Percent Solids	Percent Fat	Percent Ratio F. to S.	
4–22–24	391 L. R. S.	Phoenix American	38.53	61.47	31.75	51.65	Mojonnier
5– 7–24	218 W. W.	Pabst American	39.74	60.26	30.62	50.80	Mojonnier
6–23–24	Pabst Bros.	Pabst American	40.78	59.22	30.58	51.63	Mojonnier
6–23–24	Pabst Bros.	Pabst Brick	40.28	59.72	29.59	49.54	Mojonnier
6–23–24	Pabst Bros.	Pabst Swiss	41.56	58.44	26.87	45.97	Mojonnier
6–23–24	Pabst Bros.	Pabst Pimento	42.39	57.61	29.50	51.20	Mojonnier
6–23–24	Pabst Bros.	Pabst Mustard	42.43	57.57	28.16	49.03	Mojonnier
6–23–24	Pabst Bros.	Pabst Caraway	42.92	57.08	30.19	52.80	Mojonnier
1–26–25	Wm. Winder	Ladysmith American	44.91	55.09	25.35	46.01	Mojonnier
2–27–25	91 A. J. R.	Ladysmith Brick	48.19	51.81	19.10	36.86	Mojonnier
5–22–25	226 W. W.	Ladysmith American	45.68	54.32	22.79	41.95	Mojonnier
11– 6–25	227 W. J. K.	Phoenix American	40.95	59.05	29.78	50.43	Mojonnier
11– 6–25	228 W. J. K.	Phoenix Brick	39.50	60.50	30.96	51.17	Mojonnier

Since the preparation of the foregoing document and its presentation to the National Joint Committee on Definitions and Standards, January 18, 1926, facts as to practices that are occurring in production and in interstate commerce are of such an ominous character that we have become convinced that nothing short of legislation akin to that of the oleomargarine and filled cheese legislation, will adequately meet the requisite regulation of the whole process cheese business.

One of the most inexplicable phenomena in connection with this process cheese business has been the contradictory attitude of certain cheese dealers who at first apparently found it difficult to obtain sufficiently vituperative words in the English language in denunciation of the practice, but later reversed themselves, engaged in the practice and by "passive resistance" stood opposed to regulatory legislation. When State regulation has been under consideration they have proposed Federal regulation; and when, subsequently, Federal regulation, akin to that of oleomargarine and filled cheese, has been proposed, have assumed the attitude of passive resistance. Unless adequately regulated by legislation, both State and National, the process cheese business is a great menace alike to the rights of the public and to the cheese industry. There is no more just and fundamental principle in food legislation than that the consumer is entitled to know the character and composition of the article of food he purchases, and no phase of the cheese industry, or any other food industry within my knowledge, affords greater opportunity for fraud than that of the process cheese business if not duly regulated by law, State and National.