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DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS
WASHINGTON

Letter
Circular
LC 129

September 27, 1924.

State Laws and Rules and Regulations Relating to Milk Bottles.

At the meeting of the Ninth Annual Conference on Weights and Measures of the United States held at the Bureau of Standards in May, 1914, the question of specifications and tolerances for milk bottles was brought up, recommendations on the subject which had been drafted by the Committee on Specifications and Tolerances were presented, and these recommendations were adopted by the Conference and were recommended by the Bureau of Standards for adoption by the various States. A large number of States now by law or by rules and regulations promulgated under authority of law have requirements in relation to milk bottles, and due to the cooperation of the various interests a considerable degree of uniformity of requirement has been secured. However, since a number of States had legislation setting up requirements before the adoption of the above code, and since other States have adopted codes differing in some respects from the one adopted by the Conference, variations in the requirements of the various States still exist.

Recently the Bureau of Standards conducted an extensive field investigation to develop prevailing commercial practice as to the filling point of milk and cream bottles, and thoroughly reviewed the code formerly adopted in the light of present day conditions and the experience gained by weights and measures

officials in enforcement. As a result all the fundamental principles of the adopted code were found to be sound and following the Bureau's report, no changes were recommended when the subject came up for consideration at the Sixteenth Annual Conference and the specifications and tolerances were left unchanged. One change was recommended by the Committee on Specifications and Tolerances and was made in the code by the Seventeenth Annual Conference under the heading "Tolerance," but this change is not in the actual tolerance values prescribed but rather concerns the method of enforcement. Consequently the recommendations of the former code and that now recommended are essentially identical.

Having in mind the discrepancy in the present regulations of the various jurisdictions, the Seventeenth Conference passed a resolution urging action designed to produce a greater degree of uniformity in this regard. It is believed that the compilation herewith presented of the present laws and rules and regulations in relation to this subject will not only be of considerable general service to weights and measures officials, manufacturers of bottles and distributors of milk and cream, but will also be of material assistance in bringing about this desirable uniformity by pointing out the conditions that exist at the present time.

The summary which follows is believed to be self-explanatory.

SUMMARY OF MILK BOTTLES REQUIREMENTS

Notes. In this summary, requirements as to bottles of a nominal capacity greater than two quarts and bottles in which milk is to be pasteurized are not considered.

Whenever the abbreviation "Std." appears in any column it denotes that the State requirement in question conforms in all respects to the standard requirements of the Model State Law and of the specifications and tolerances adopted by the Annual Conference and recommended by the Bureau of Standards, as summarized at the beginning of the table.

A blank space in any column denotes that no requirement exists as to that heading.

State	Source: Law or Regulations	Sizes permitted	Filling point	Tolerances	Markings: Capacity	Markings: Mfgrs. name, initials or trademark	Markings: Designating number	Markings: Other marks
Summary of standard requirements (For full text see pp. 0-3)		Gill, 1/2 pt., pt., qt., 3 pt., 1/2 gal.	1/4" below cap seat	On ind. bot.: ±2, 2, 3, 4, 5, 6 fl. dr. On ave. cap: 1/4 of above	Side	Side or bottom	Side or bottom	"Sealed" on side
Ala.	Reg.	Std	Std.	Std.	Std.	Std.	Std.	Name, initial or trademark of user on side or bottom.
Ariz.	Law	Std.	Bottom of lip	Std.	Std.			
Ark.	None							
Calif.	Reg.	Std.	(1)	Std. in part(2)	Std.	Std.		
Colo.	None							

(1) Standard with the exception that filling point for bottles of diameter of 2" or less is 1/8" below cap seat.

(2) Tolerances on average capacity are: 2 dr. on 1/2 gal., 1.75 dr. on 3 pt., 1.5 dr. on qt., and 1.25 dr. on pt. 1/2 pt. and gill.

State	Source: Law or Regulations	Sizes permitted	Filling point	Tolerances	Markings: Capacity	Markings: Mfgrs. name, initials or trademark	Markings: Designating number	Markings: Other marks
Conn.	None							
Del.	Law							
D.C.	L.& R.	Std.	Bottom of cap seat	Std.	Std.	Std.	Std.	Name, initial or trademark of user on bottle or cap
Fla.	None							
Ga.	None							
Idaho	Law	Std. except 3 pt. and gill omitted						
Ill.	L.& R.	Std. except 1/3 qt. added	Bottom of cap	Std (3)	Std.	Std.	Std.	Std.
Ind.	Reg.	Std.	Bottom of cap seat	Std.				
Iowa	Law	Std.	Bottom of lip		Std.	On bottom only	On bottom only	
Kans.	L.& R.	Std. except 3 pt.& gill omitted	1/4" of cap seat (4)		Std.	Std.		
Ky.	None							
La.	None							

(3) The tolerance on the 1/3 quart size is 2 1/2 drams in excess or deficiency.

(4) Filling point is 1/4" below cap seat for quart and smaller sizes; larger sizes in proportion.

State	Source: Law or Regulations	Sizes permitted	Filling point	Tolerances	Markings			
					Capacity	Mfgrs. name, initials or trademark	Designating number	Other marks
Maine	Law	Qt., pt. & 1/2 pt.	Bottom of cap	(5)	Position not stated	Position not stated	On upper half only	"Maine seal" on upper half
Md.	None							
Mass.	L.& R.	Std. ~~gill omi~~	Bottom of cap	(6)	Side below seal	Position not stated	In center of seal	"Mass." above and "seal" below designating No.
Mich.	Law	Std. except 10 oz. added	Bottom of lip	Std. (7)	Std.	Std.	Std.	Std.
Minn.	Reg.	Std.	Cap seat	Std.	Std.	Std.		
Miss.	None							
Mo.	None							
Mont.	Law				"Conspicuous"			
Neb.	Law	Std. except 3 pt. & gill omitted						

(5) Tolerances are in excess only: 6 dr. on quart; 4 dr. on pint; and 2 dr. on 1/2 pint. No tolerance on average capacity is fixed.

(6) The tolerances for individual glass bottles are standard with the exception that the tolerance in excess on the pint is 4 drams. No tolerance on average capacity is fixed. Paper or fibre bottles are required to hold not less than their full nominal capacity, no tolerance in deficiency being allowed.

(7) The tolerance on the 10 oz. size is 2 1/2 drams in excess or deficiency.

State	Source: Law or Regulations	Sizes permitted	Filling point	Tolerances	Markings			
					Capacity	Mfgrs. name, initials or trademark	Designating number	Other marks
Nev.	L.& R.	Std. except 3pt.& gill omitted	Std.	Std.	Std.	Std.		
N. H.	L.& R.	Std.	Std.	Std.	Std.	Std.		
N. J.	L.& R.	Std.	Bottom of cap ring	Std.	Std.	Std.	Std.	
N. M.	Law	Std. except 3 pt. omitted						
N. Y.	L.& R.	Std.	Bottom of cap	(8)		Std.	Std.	
N. C.	None							
N. D.	Reg.	Std.	Std.	Std.	Std.	Std.		
Ohio	Reg.	Std.	Std.	Std.	Std.	Std.		
Okla.	None							
Ore.	Reg.	Std.	Std.		Std.	Std.		
Penn.	L.& R.	Std.	Std.	Std.	Std.	Std.		
R. I.	Law			1/2 oz. on each size		Position not stated		Other marks as may be prescribed

(8) Standard except no tolerances are fixed on average capacity.

State	Source: Law or Regulations.	Sizes permitted	Filling point	Tolerances	Markings			
					Capacity	Mfgrs. name, initials or trademark	Designating number	Other marks
S. C.	None							
S. D.	Law	Std.	Bottom of lip	Std.	Std.	On side only		
Tenn.	Reg.	Std.	Std.	Std.	Std.	Std.		
Texas	Reg.	Std. except 3 pt. omitted						
Utah	None							
Vt.	Reg.	Std.	Std.	Std.	Std.	Std.		
Va.	Law	Std.			Std.	Std.	Std.	Std.
Wash.	L.& R.	Std. except 3 pt.&gill omitted	Std.	Std	Std.	Std.		
W. Va.	L.& R.	Std.	Std.	Std.	Std.	Std.	Std.	Std.
Wis.	L.& R.	Std.	Bottom of cap seat	Std.	Std.	Std.	Std.	Std.
Wyo.	none							

Requirements as to markings on milk bottles included in the Model State Law in relation to weights and measures adopted by the Annual Confefence on Weights and Measures and recommended for adoption by the Bureau of Standards.

Sec. 27. Bottles used for the sale of milk or cream shall be of the capacity of one-half gallon, three pints, one quart, one pint, one-half pint, and one gill. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle the capacity of the bottle and the word "Sealed"; and in the side or bottom of the bottle the name, initials, or trade-mark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the State superintendent (commissioner) of weights and measures upon application by the manufacturer, and upon the filing by the manufacturer of a bond in the sum of $1,000, with sureties, to be approved by the secretary of state (attorney general) conditioned upon their conformance with the requirements of this section. A record of the bonds furnished and the designating numbers and to whom furnished shall be kept in the office of the superintendent (commissioner) of weights and measures. * * * .

Specifications and tolerances for milk bottles adopted by the Annual Conference on the Weights and Measures of the United States, May 1914, as amended May 1924, and recommended for adoption by the National Bureau of Standards.

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Specifications.-1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid capacity measures",* and they shall be made to contain their indicated capacities at a temperature of 20° C (68° F).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, That a larger distance shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least halfway around it, which indicates the correct capacity, and directly over, below, or beside this line, with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the table below.

Capacity of bottle	Maximum distance allowable. Inches
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

The tolerances to be allowed in excess or deficiency on bottles to be used in the sale of milk or cream shall be as follows:

(1) When a test comprises less than 25 bottles of the same capacity and ownership, the tolerances shall be those given in Table A below:

(2) When a test comprises 25 or more bottles of the same capacity and ownership, the tolerances shall be applied to the average capacity of at least 25 such bottles, these to be taken at random when the whole supply available is not tested. The error on any individual bottle among those tested shall not exceed the values shown in Table A below. The error on average capacity of the bottles tested shall not exceed the values shown in Table B below. Provided, however, That in the case of bottles already in use, if the average error is greater than that above specified, then, if desired all of the bottles of the particular size and ownership in question may be treated as individual measures, in which case all of these bottles shall be separately tested, and the tolerances shown in Table C below shall be applied.

Capacity of Bottle	TABLE A Tolerance on Individual Bottles		TABLE B Tolerance on Average Capacity		TABLE C Special Tolerance for Individual Bottles already in use. In Excess		In Deficiency	
	Drams	Cubic Inches	Drams	Cubic Inches	Drams	Cu. In.	Drams	Cu. In.
2 quarts	6	1.4	1.5	0.35	6	1.4	3	0.7
3 pints	5	1.2	1.25	.29	5	1.2	2.5	.6
1 quart	4	.9	1.0	.23	4	.9	2	.5
1 pint	3	.7	.75	.17	3	.7	1.5	.3
1/2 pint	2	.5	.5	.12	2	.5	1.0	.2
1 gill	2	.5	.5	.12	2	.5	1.0	.2

Former Tolerance Paragraph for Milk Bottles

Prior to the meeting of the Seventeenth Annual Conference on Weights and Measures in May, 1924, the tolerance paragraph recommended was as given below. Consequently at the present time this is the one in general force and effect in those States noted as having adopted the recommendations of the Bureau of Standards and the Annual Conference.

It is to be noted that the numerical values of the tolerances for individual bottles and for average content of bottles, are unchanged by the amendment made, the modification mainly involving the method of application of tolerances.

Tolerances.-The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Note.- To find the algebraic mean of a number of errors, first add all those errors which are in excess; then add all those errors which are in deficiency; then subtract the smaller sum from the larger; and finally divide this result by the total number of bottles tested.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
2 quarts	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

ALABAMA

Specifications.

1. Bottles used for the sale of milk or cream shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, That nothing in this specifications shall be construed to prevent the use of bottles for milk or cream in the 3-pint size; and provided, further, that the specification shall be construed to mean "To contain and not to deliver" the capacity at a temperature of 20 degrees C (68 degrees F).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade mark, of the manufacturer thereof, or a number designative to the manufacturer by the Commissioner of Agriculture.

3. Glass bottles, used for the sale of milk or cream, with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple; Provided, however, That there shall be a clearly defined line drawn or otherwise clearly and permanently marked in or on the bottle and extending at least half way around it, which shall indicate the correct capacity, and directly below, over or beside this line with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle.

Tolerances.

The tolerance to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottle, shall not be greater than the value shown in the following table. The error on the average capacity of bottle shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Note: To find the algebraic mean of a number of errors, first add to all those errors which are in excess; then add all those errors which are in deficiency; then subtract the smaller sum from the larger; and finally divide this result by the total number of bottles tested.

Capac. of Bottles	Tol. on Individual Bottles		Tol. on Average Capacity	
	Drams	Cubic in.	Drams	Cubic in.
1 gallon	10	2.25	2.5	0.56
2 quarts	6	1.4	1125	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Rules and Regulations governing Weights and Measures and Weighing and Measuring Devices, Part 1, Approved April 2, 1924)

ARIZONA

Bottles used for the sale of distilled water, milk, and cream, shall be of the capacity of one-half gallon, three pints, one quart, one pint, one-half pint, and one gill filled full to the bottom of the lip.

The following variations of individual bottles or jars may be allowed, but the average content of not less than twenty-five bottles selected at random from at least four times the number tested must not be in error by more than one-fourth of the tolerances:

Six drams above and six drams below on the half gallon.

Five drams above and five drams below on the three pint.

Four drams above and four drams below on the quart.

Three drams above and three drams below on the pint.

Two drams above and two drams below on the half pint.

Two drams above and two drams below on the gill.

Bottles or jars used for the sale of distilled water, milk, or cream, shall have clearly blown, or otherwise permanently marked in the side of the bottles the capacity of the bottles and in the side or bottom of the bottles the name, initials, or trade-mark, of the dealer using the same. Any dealer who uses for the purpose of selling distilled water, milk, or cream, jars or bottles purchased after this law takes effect, that do not comply with the requirements of this section as to marking and capacity, shall be deemed guilty of using a false or insufficient measure. The said State Inspector and city sealers of weights and measures, are not required to seal all bottles or jars used for distilled water, milk, or cream, but they shall from time to time make tests of individual bottles used by the various persons, firms, or corporations, in the State over which they have jurisdiction, in order to ascertain whether the above provisions are being complied with.

(Revised Stats., 1913, title 56, p.1787, Sec.5535)

CALIFORNIA

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Specifications

1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures."(1)

2.(2) Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over two inches immediately below the cap seat or stopple shall hold the correct capacity when filled within 1/8 inch of this cap seat or stopple; bottles with an inside diameter of over this amount immediately below the cap seat or stopple shall hold the correct capacity when filled to within 1/8 inch of this cap seat or stopple Provided, however, that when bottles are used for the purpose of pasteurizing milk or cream in the bottle, a larger distance shall be allowed below the cap seat or stopple but not to exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least one-half way around it, which indicates the correct capacity. The words "For milk pasteurized in the bottle only" or a similar wording shall be clearly blown or otherwise clearly and permanently marked in or on the side of the bottle; and directly over, below or beside the line mentioned above, the words, "Fill to this line". Such bottles shall be used only when the milk or cream is pasteurized in the bottle. (The table referred to was inadvertently omitted in the pamphlet issued by the State).

Tolerances

The tolerances to be allowed in excess or deficiency on individual bottles, and on the average content of bottles, shall not be greater than the following values. The error on the average content of bottles shall be determined by finding the

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(1) Liquid measures of the customary systems shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary sub-multiple of the gallon, that is, a measure obtained by dividing the gallon by the number 2, or by a power of the number 2; provided, however, that nothing in this specification shall be construed to prevent the use of forms for ice cream exclusively, in 5 pint and 3 pint sizes, or bottles for milk or cream in the 3 pint size.

(2) Applies to Class 1 apparatus only.

CALIFORNIA (continued)

error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the average of these errors.

Capacity	Tolerance on individual bottle		Tolerance on average content	
1/2 gallon	6 drams	1.4 cubic inch	2.0 drams	.5 cubic inc.
3 pints	5 "	1.2 " "	1.75 "	.43 " "
1 quart	4 "	.9 " "	1.5 "	.34 " "
1 pint	3 "	.7 " "	1.25 "	.29 " "
1/2 pint	2 "	.5 " "	1.25 "	.29 " "
1 gill	2 "	.5 " "	1.25 "	.29 " "

(Tolerances and Specifications for Commercial Weighing and Measuring Apparatus, State Department, 1915)

DELAWARE

It shall be the duty of the regulator of weights and measures in each county to inspect all bottles or cans used for the shipment of milk or cream, and to stamp or mark each bottle or can so inspected by him, with a stamp of inspection showing that the same has been inspected and that the capacity is correct, according to the standard measure for milk and cream in this State at the time of such inspection.
(Rev. Code, 1915, ch.82, sec.2927, as amended by Laws,1915, ch.216, p.635)

DISTRICT OF COLUMBIA

That bottles or jars used for the sale of milk or cream shall be of the capacity of one gallon, half-gallon, three pints, one quart, one pint, half-pint, or one gill when filled to the bottom of the cap seat, stopple, or other designating mark. Such bottles or jars shall have clearly blown or otherwise permanently marked in the side of each such bottle or jar or printed on the cap or stopple the name and address of the person, firm, or corporation who or which shall have bottled such milk or cream. Any person who uses, for the purpose of selling milk or cream, bottles or jars which do not comply with the requirements of this section shall be deemed guilty of using false measure.
(Act of Congress, approved March 3, 1921)

The District of Columbia has adopted the specifications and tolerances recommended by the Bureau of Standards in so far as they are not in conflict with the provisions of the law.

IDAHO

All milk or cream that shall be sold in bottles shall be sold only in bottles containing half-pints, pints, quarts, half-gallons or gallons. All other liquid commodities shall be sold only by standard liquid measure or standard weight, except where parties otherwise agree.

(Comp. Laws, 1918, vol.1, ch.109, p.651, sec.109:22)

ILLINOIS

Bottles used for the sale of milk or cream shall be of the capacity of one-half gallon, three pints, one quart, one pint, one-third quart, one-half pint, and one gill when filled to the bottom of the cap, ring or stopple. The following variations on individual bottles or jars may be allowed, to-wit: six drams above and six drams below on the half gallon, five drams above and five drams below on the three pint, four drams above and four drams below on the quart, three drams above and three drams below on the pint, two and one-half drams above and two and one-half drams below on the one-third quart, two drams above and two drams below on the one-half pint, and two drams above and two drams below on the gill. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle the capacity of the bottle and the word "sealed"; and in the side or bottom of the bottle the name, initials, or trade-mark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the Director of Trade and Commerce upon application by the manufacturer, and upon the filing by the manufacturer of a bond in the sum of $1,000, with sureties, to be approved by the Director of Trade and Commerce, conditioned upon their conformance with the requirements of this section. A record of the bonds furnished and the designating numbers and to whom furnished shall be kept in the office of the Director of Trade and Commerce.

PROVIDED, the requirement that the word "sealed" and the designating number to be placed upon the bottle shall not be enforced as to any such bottles in use at the time of the passage of this Act until the first day of January, A.D., 1923;
AND PROVIDED FURTHER, such requirement for the marking of bottles shall not be construed as modifying or repealing any other laws of this State with reference to this subject.

Any manufacturer who sells or offers to sell milk or cream bottles to be used in this State that do not comply, as to size and markings, with the provisions of this section shall suffer a penalty of $500, to be recovered by the Attorney General in an action against the offender's bondsmen to be brought in the name of the People of the State. Any dealer who uses, for the purpose of selling milk or cream, jars or bottles purchased after this law takes effect that do not comply with the requirements of this section as to markings and capacity, shall be deemed guilty of using a false or insufficient measure.

ILLINOIS (Continued)

City inspectors of weights and measures are not required to seal bottles or jars for milk or cream marked as in this section provided, but they shall have the power to, and shall from time to time, make tests on individual bottles used by the various persons, firms, or corporations, in the territory over which they have jurisdiction in order to ascertain if the above provisions are being complied with, and they shall immediately report violations found to the Director of Trade and Commerce. (Revised Stats., 1931, ch.147, p.2002, sec.25)

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in the following sizes: 1/2 gallon, 3 pints, 1 quart, 1 pint, 1/2 pint, 1 gill.

2. Each bottle shall have its capacity and the word "Sealed" clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trademark of the manufacturer and designating number.

3. Glass bottles shall hold the correct capacity within the tolerances prescribed by law when filled to the cap seat or stopple. Provided, however, that when bottles are used for the purpose of pasteurizing milk or cream in the bottle the correct capacity of the bottle may be some distance below the cap seat or stopple, but this distance shall not exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the side of the bottle and extending at least half way around it which indicates the correct capacity of the bottle to that point at a temperature of 68° F. (20° Centigrade). Directly over, below or beside this line the words "Fill to Line", or a similar and suitable inscription, shall be clearly and permanently marked in or on the bottle.

Capacity of bottle	Maximum distance allowable. Inches
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances. - The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles

ILLINOIS (Continued)

shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic inches	Drams	Cubic inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Tolerances and Specifications on Weights and Measures and Weighing and Measuring Devices, October 1, 1921)

INDIANA

Specifications. A bottle used for the sale of milk and cream must contain the amount for which it is sold.

Testing. Test milk bottles in the same manner as liquid capacity measures, the bottle being filled up to the bottom of the cap ring or stopple.

The following variations on individual bottles or jars are allowable, but the average capacity of not less than 25 bottles taken at random from at least four times the number tested must not be in error by more than one-quarter of the tolerances.

Size of Bottle or Jar	Maximum Above	Maximum Below
1/2 gallon	6 drams	6 drams
3 pint	5 drams	5 drams
1 quart	4 drams	4 drams
1 pint	3 drams	3 drams
1/2 pint	2 drams	2 drams
1 gill	2 drams	2 drams

(Instructions for Weights and Measures Officials, 1913)

IOWA

Bottles used for the sale of milk and cream shall be of a capacity of one-half gallon, three pints, one quart, one pint, one-half pint, one gill, filled full to the bottom of the lip. Bottles or jars used for the sale of milk shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle, and, on the bottom of the bottle, the name, initials, or trade-mark of the manufacturer, and designating number, which designating number shall be different for each manufacturer and may be used in identifying bottles. The designating number shall be furnished by the commissioner on request. The state sealer shall not be required to seal bottles or jars for milk or cream, marked as in this section provided, but the inspectors shall from time to time make tests of individual bottles in use, in order to ascertain whether the above provisions are being complied with.

(Suppl., 1913 to Code, Title XV, p.1260, Sec.3009-k)

KANSAS

All milk or cream that shall be sold in bottles shall be sold only in bottles containing half-pints, pints, quarts, half-gallons or gallons.
(Rev. Stats., 1923, ch.83, sec.83-118)

Each milk bottle should have its capacity blown in the side of the bottle and the name or initials of the maker blown in the side or bottom of the bottle.

Ordinary milk bottles of the size of a quart or under should hold the capacity indicated when filled, at a temperature of 70° Fahrenheit, to within not less than one-quarter of an inch below the cap seat or stopple of the bottle; larger sizes in proportion. This is necessary so that machine filled bottles will be filled with the full amount designated by the capacity of the bottle.

(Kansas Weights and Measures Bulletin No. 4, 1917)

MAINE

Glass bottles and jars which are used for the distribution of milk or cream to consumers and which hold, when filled to a level with the bottom of the cap or stopple, not less than thirty-two ounces or more than thirty-two ounces and six drams; not less than sixteen ounces or more than sixteen ounces and four drams; not less than eight ounces or more than eight ounces and two drams for the quart, pint and one-half pint, respectively, shall be sealed as full measure under the provisions of section thirteen of chapter forty-eight, or by the manufacturer.

All dealers in milk or cream who use glass bottles or jars for the distribution of milk or cream to consumers, which have not been sealed by the manufacturer, shall bring such bottles or jars to the office of their city or town sealer to be sealed as aforesaid. If a bottle or jar has once been sealed by a sealer of weights and measures, or by the manufacturer, it shall not in any case be necessary to have it sealed again at any time while it is used for the distribution of milk or cream to consumers. Glass bottles or jars sealed under the provisions of this section shall not be legal measures except for the distribution of milk or cream to consumers.

Such bottles or jars as are sealed by the manufacturer shall be marked with the name, initials or trade mark of the manufacturer, and designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number and the words "Maine Seal" shall be marked on the outside of the upper half of each bottle. The designating number shall be furnished by the state sealer of weights and measures upon application by the manufacturer, and upon filing by the manufacturer, with the treasurer of state, of a bond payable to the state in the sum of one thousand dollars, with sureties to be approved by the attorney general, conditioned upon his conforming to the requirements of this section. A record of the bonds furnished, the designating numbers and to whom furnished, shall be kept in the office of the state sealer of weights and measures.

Any manufacturer who sells milk or cream bottles to be used in this state that do not comply as to size and markings with the provisions of the two preceding sections, shall forfeit five hundred dollars, to be recovered by the attorney-general in an action upon the bonds of such manufacturer. Any dealer who uses for the purpose of selling milk or cream, jars or bottles purchased after the third day of July, nineteen hundred and fifteen, that do not comply with the requirements of this section as to markings and capacity, shall be deemed guilty of using false or insufficient measures.

(Rev. Stats., 1916, ch.37, p.648,sec.20,21 and 22)

MASSACHUSETTS

Glass bottles or jars used for the distribution of milk or cream to consumers, and holding, when filled to a level with the bottom of the cap or stopple or other definite filling poin not less than three ounces and seven drams and not over four ounces and two drams; not less than seven ounces and six drams and not over eight ounces and two drams; not less than fifteen ounces and five drams and not over sixteen ounces and four drams; not less than thirty-one ounces and four drams and not over thirty-two ounces and four drams; not less than forty-seven ounces and three drams and not over forty-eight ounces and five drams; not less than sixty-three ounces and two drams and not over sixty-four ounces and six drams, shall be sealed as measures under section forty-one or by the manufacturer. Dealers in milk or cream using glass bottles or jars for the distribution of milk or cream to consumers, not sealed by the manufacturer, shall bring them into the office of the sealer in their town, to be sealed; but no fee shall be charged or received for sealing them. If a bottle or jar has once been sealed by a sealer or manufacturer, it need not be sealed again while used for the distribution of milk or cream to consumers. Glass bottles or jars sealed hereunder shall be legal measures only for the distribution of milk or cream to consumers. Bottles or jars sealed by the manufacturer shall be marked with his name, initials, or trade mark, and by any other mark required by the director. The sealing of such bottles or jars by the manufacturer shall not affect any law relating to the giving of false measure or the using, or having in possession, of false measures with intent to use the same. The director, on approval by the commissioner of labor and industries may revoke the authority given by him to any manufacturer under this section on proof that the authorized seal or designating mark has been affixed to any bottle or jar not conforming to the respective capacities provided for in this section.

Paper or fibre bottles and jars used for the distribution of milk or cream to consumers, and holding, when filled to a level with the bottom of the cap or stopple, not less than eight, sixteen, thirty-two, forty-eight or sixty-four ounces, shall be sealed as measures under section forty-one or fifty-one, or by the manufacturer in the manner provided in the preceding section, and when so sealed may be used as provided by law for glass milk jars and bottles. Every such bottle or jar shall have plainly stamped upon it by the manufacturer the words: "Penalty for re-use, twenty-five dollars."

Whoever re-uses any such paper or fibre bottle or jar for distributing milk, cream or other liquid used for food after such bottle or jar has been once used therefor, shall be punished by a fine of not more than twenty-five dollars.

MASSACHUSETTS (continued)

When notified by a dealer in milk or cream using glass bottles or jars for the distribution thereof that he has in his possession not less than six gross of such bottles or jars not sealed, sealers shall forthwith seal them as provided in section fifteen, at a suitable place provided by the dealer.

Except as otherwise provided, sealers shall receive the following fees for sealing the following weighing or measuring devices: * * *

(g) Milk bottles or jars, fifty cents per gross.

(General Laws, Chapter 98, Sections 15, 16, 17, 51 and 56)

Sealing of Milk Bottles and Jars.

Under the provisions of Section 15, chapter 98, General Laws, glass bottles or jars, which are used for the distribution of milk or cream to consumers, may be sealed as measures by the manufacturers. Such bottles or jars shall be marked with the name, initials or trade mark of the manufacturer, and by any other mark which the Director of Standards may require. Such jars to be sealed must be capable of holding the quantities specified in said section 15, Chapter 98, General Laws, and shall not be legal measures except for the distribution of milk or cream to consumers.

MASSACHUSETTS (Continued)

Manufacturer's Seal Marks

All glass bottles or jars sealed by the manufacturer under the provisions of section 43, chapter 62, Revised Laws, as amended, shall have the seal, in letters three-eighths of an inch in height, arranged in circular form upon the breast of the bottle or jar. The special designating mark of the manufacturer shall appear in the center of the circle with the abbreviation "Mass." above and the word "Seal" below the manufacturer's designation. Below the seal, however, toward the bottom of the bottle or jar, the capacity of the same shall be indicated by figures and letters three-eighths of an inch in height, as, for instance, "1/2 pt.," "1 qt.," etc., provided that when the size or shape of bottles or jars renders the use of smaller figures and letters necessary or desirable, the Commissioner may authorize the use of such smaller figures or letters.

Under the provisions of the statutes, manufacturers may seal bottles or jars of the following capacities: half pint, pint, quart, three pints and two quarts. Statutory provision is made for allowable variations in excess or deficiency in the manufacture of glass bottles or jars, but in the case of paper or fiber bottles and jars the standard is the minimum and no tolerance in deficiency is allowed.
(Sealers' Manual, Second Edition, 1919)

MICHIGAN

On and after January one, nineteen hundred sixteen, bottles used for the sale of milk and cream in this state shall be of the capacity of half gallon, three pints, one quart, one pint, ten ounce, half pint, one gill filled full to the bottom of the lip. The following variations on individual bottles or jars may be allowed: Six drams above and six drams below on the half gallon; five drams above and five drams below on the three-pint; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two and one-half drams above and two and one-half drams below on the ten ounce; two drams above and two drams below on the half pint; two drams above and two drams below on the gill. But the average contents of not less than twenty-five bottles selected at random from at least four times the number tested must not be in error by more than one-quarter of the tolerances: One and five-tenths drams above and one and five-tenths drams below on the half gallon; one and twenty-five hundredths drams above and one and twenty-five hundredths drams below on the three pint; one dram above and one dram below on the quart; seventy-five hundredths drams above and seventy-five hundredths drams below on the pint; seventy-five hundredths drams above and seventy-five hundredths drams below on the ten ounce; five-tenths drams above and five-

MICHIGAN (Continued)

tenths drams below on the half pint; five-tenths drams above and five-tenths drams below on the gill. Bottles or jars used for the sale of milk shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle and the word "sealed" and in the side or bottom of the bottle the name, initials or trade mark of the manufacturer and designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the State superintendent of weights and measures upon application by the manufacturer, and upon filing by the manufacturer of a bond in the sum of one thousand dollars with sureties to be approved by the attorney general, conditioned upon their performance of the requirements of this section. A record of the bonds furnished, the designating numbers, and to whom furnished, shall be kept in the office of the superintendent of weights and measures.

On and after January one, nineteen hundred sixteen, any manufacturer who sells milk or cream bottles to be used in this State, which do not comply as to size and markings with the provisions of this act, shall suffer the penalty of five hundred dollars, to be recovered by the attorney general in an action against the offender's bondsmen, to be brought in the name of the people of the State. Any dealer who uses, for the purpose of selling milk or cream, jars or bottles purchased after this law takes effect, which do not comply with the requirements of this act as to markings and capacity, shall be deemed guilty of using false or insufficient measure.

Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as in this act provided, but they shall from time to time make tests on individual bottles used by the various firms in the territory over which they have jurisdiction, in order to ascertain whether the above provisions are being complied with, and they shall report violations found immediately to the superintendent of weights and measures. Any dealer who knowingly uses for the purpose of selling milk or cream, jars or bottles purchased after this law takes effect, which do not comply with this act as to marking the capacity, shall be guilty of a misdemeanor and be punished accordingly.

(Comp. Laws, 1915, ch.120, p.2307. Sec.6279, Sec.6280, Sec.6281)

MINNESOTA

Specifications - 1. Bottles used for the sale of milk or cream shall be made only in the following sizes: 1/2 gallon, 3 pints, 1 quart, 1 pint, 1/2 pint, 1 gill.

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade mark of the manufacturer thereof.

3. Glass bottles shall hold the correct capacity within the tolerances prescribed when filled to the cap seat or stopple: Provided, however, that when bottles are used for the purpose of pasteurizing milk or cream in the bottle the correct capacity of the bottle may be some distance below the cap seat or stopple, but this distance shall not exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the side of the bottle and extending at least half way around it which indicates the correct capacity of the bottle to that point at a temperature of 68 degrees F. (20 degrees C). Directly over, below or beside this line the words "Fill to Line" or a similar and suitable inscription shall be clearly and permanently marked in or on the bottle.

Capacity of Bottle	Maximum Distance Allowable
2 quarts	2 inches
3 pints	1 3/4 inches
1 quart	1 1/2 inches
1 pint	1 inch
1/2 pint	5/8 inch
1 gill	5/8 inch

Tolerances - The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of Bottles	Tolerance on Individual Bottles		Tolerance on Average Capacity	
	Fluid Drams	Cubic Inches	Fluid Drams	Cubic Inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	0.29
1 quart	4	0.9	1.0	0.23
1 pint	3	0.7	0.75	0.17
1/2 pint	2	0.5	0.5	0.12
1 gill	2	0.5	0.5	0.12

(Minnesota Specifications and Tolerances for Measures)

MONTANA

All milk, cream, and skimmed milk shall be sold only by standard wine measure, and by or in measures, cans, jars, bottles, or other vessels or receptacles, which shall prior to being used in such scale, be sealed by the sealer of weights and measures of the town where the person so using the same shall usually reside in this State, or of the town where such milk shall be sold for use; and every person selling any of the same contrary to this section, or delivering any of the same sold contrary hereto, shall be fined for the first offense not less than fifty dollars and not exceeding one hundred dollars and for the subsequent offense not less than one hundred dollars or imprisonment not to exceed ninety days, or both such fine and imprisonment. Any purchaser of milk, cream, or skimmed milk, having reason to believe that any measure, can, jar, bottle, or other vessel or receptacle, in which milk, cream, or skimmed milk is sold and delivered to him, is not of sufficient size or capacity to contain, by standard wine measure, the amount thereof purchased, may apply to the sealer of weights and measures, which sealer shall test the capacity of the same and issue to such purchaser his certificate stating the capacity thereof; and if such capacity, according to such certificate, shall be less than the amount purchased, such purchaser may make complaint and deliver such certificate to any officer authorized to make complaint for the violation of this Act.

No person or corporation shall, after the passage of this Act, sell or offer for sale within the State of Montana, any milk or cream in bottles or in glass jars, unless each of said bottles or glass jars in which said milk or cream is sold or offered for sale shall have blown into it, or otherwise indelibly and permanently indicated thereon in a legible and conspicuous manner, the capacity thereof, and the State sealer of weights and measures or inspector of weights and measures, or deputy sealer of weights and measures, shall have the right, at any time, to examine any bottle or glass jar in which milk or cream is sold or offered for sale in the State of Montana, or which is used by any person or corporation for the purpose of containing milk or cream to be sold or offered for sale, in order to ascertain whether such bottle or jar is of a capacity not less than that which it purports to be; and if any such bottle or jar is of less capacity than that which it purports to be, or if any such bottle or jar shall not have blown into it, or otherwise indelibly and permanently indicated thereon in a legible and conspicuous manner, its capacity as aforesaid, the person or corporation selling or offering for sale milk or cream in any such bottle, or jar, or having in his possession any such bottle or jar, to be used or which has been used for the purpose of containing milk or cream to be sold or offered for sale in said State of Montana shall, upon conviction, be fined not less than five dollars nor more than one hundred dollars for each offense; and each and every bottle

MONTANA (Continued)

or glass jar found in the possession of any person or corporation used or to be used, or which has been used by such person or corporation for the purpose of containing milk or cream to be sold or offered for sale in the state of Montana, which shall be found to be of a less capacity than that blown into the same, or otherwise so indelibly and permanently indicated thereon, or which shall not have blown into it or otherwise indelibly and permanently indicated thereon in a legible and conspicuous manner the capacity as aforesaid, shall constitute a separate and distinct offense on the part of such person or corporation, and upon conviction such person or corporation shall be fined in a sum not less than ten dollars nor more than three hundred dollars.
(Rev. Codes, 1921, Vol.1, Sec. 4254 and 4255)

NEBRASKA

All milk or cream that shall be sold in bottle shall be sold only in bottles containing half-pints, pints, quarts, half gallons or gallons. All liquid commodities shall be sold only by standard liquid measure or standard weight, except where parties shall have a written agreement specifying some other unit of measure.
(Comp. Stats., 1922, Part 2, Title 3, Art.18, p.2335, Sec. 7587)

NEVADA

All milk or cream that is sold or offered for sale in this state in bottles shall be sold or offered for sale only in bottles containing standard gallons, half-gallons, quarts, pints or half-pints. * * * .
(Revised Laws, 1912, Vol.1, section 4805)

The specifications and tolerances approved and adopted by the National Association of Weights and Measures Officials are adopted by this Department for the enforcement of the State weights and measures act.
(Weights and Measures Law, issued by the Department of Weights and Measures of Nevada, 1921).

NEW HAMPSHIRE

Milk shall be bought and sold by wine measure, the standard for which shall be two hundred and thirty-one cubic inches to the gallon, and for subdivisions of the gallon in the same proportion

All measures or vessels used in the sale of milk shall be tried and proved by the standard of wine measure, and the quantity they hold agreeably to such standard shall be marked thereon. Any person selling any milk by any other than measures so tried, sealed, and marked, shall forfeit for each offense ten dollars.
(Pub. Stat. and Sess. Laws, 1901, Ch.127, p.401. Sec.12 and 13)

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures".* And they shall be made to contain their indicated capacities at a temperature of 20 degrees C. (68 degrees F.).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trademark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over two inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, that a larger distance shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least half way around it, which indicates the correct capacity, and directly over, below, or beside this line, with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The

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* Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, that nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

NEW HAMPSHIRE (Continued)

distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the table below:

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances.- The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Tolerances and Specifications for Weights and Measures and Weighing and Measuring Devices, July 12, 1917)

NEW JERSEY

Bottles used for the sale of milk and cream shall be of the capacity of half-gallon, three pints, one quart, one pint, half-pint and one gill, filled full to the bottom of the cap ring or stopple. The following variations on individual bottles or jars may be allowed: Six drams above and six drams below on the half-gallon; five drams above and five drams below on the three pints; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two drams above and two drams below on the half-pint, and two drams above and two drams below on the gill. Bottles or jars used for the sale of milk shall have clearly blown, or otherwise permanently marked, in the sides or bottom of the bottle the name, initials or trade-mark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the State Superintendent of Weights and Measures upon application by the manufacturer, and a record of the designating numbers and to whom furnished shall be kept in the office of the superintendent of weights and measures.

Any manufacturer who sells milk and cream bottles to be used in this State that do not comply as to size and marking with the provisions of this act shall suffer a penalty of five hundred dollars, to be recovered in an action of debt to be brought by the State superintendent of weights and measures, and the penalty, when recovered, shall be paid into the treasury of this State. Any dealer who knowingly uses for the purpose of selling milk or cream jars or bottles purchased after this law takes effect that do not comply with this section as to marking the capacity shall be guilty of a misdemeanor.
(Suppl. 1911-1915 to Comp. Stats., 1910, p.1624)

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures."* And they shall be made to contain their indicated capacities at a temperature of 20 degrees C (68 degrees F.).

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* Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

NEW JERSEY (Continued)

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trademark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over two inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, That a larger distance shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least half way around it, which indicates the correct capacity, and directly over, below, or beside this line, with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the table below:

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances.-The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle.	Tolerance on individual bottles.		Tolerance on average capacity.	
	Drams.	Cubic Inches.	Drams.	Cubic Inches.
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Tolerances and Specifications for Weights and Measures and Weighing and Measuring Devices, August 1, 1916)

NEW MEXICO

All milk or cream that shall be sold in bottles shall be sold only in bottles containing quarter pints, half pints, pints, quarts, half-gallons or gallons. All other liquid commodities shall be sold only by standard liquid measure or standard weight, except where parties otherwise agree.
(Stats., 1915, Ch.116, p.1647, Sec. 5844)

NEW YORK

Bottles used for the sale of milk and cream shall be of the capacity of half gallon, three pints, one quart, one pint, half pint and one gill, filled full to the bottom of the cap ring or stopper. The following variations on individual bottles or jars may be allowed: six drams above and six drams below on the half gallon; five drams above and five drams below on the three pint; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two drams above and two drams below on the half pint, and two drams above and two drams below on the gill. Bottles or jars used for the sale of milk shall have clearly blown, or otherwise permanently marked, in the sides or bottom of the bottle the name, initials or trade-mark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the commissioner upon application by the manufacturer, and a record of the designating numbers and to whom furnished shall be kept in the office of the commissioner. No manufacturer shall sell milk or cream bottles to be used in this state that do not comply as to size and marking with the provisions of the last section. No dealer shall knowingly use, for the purpose of selling milk or cream, jars or bottles that do not comply with the provisions of the last section.
(Article 16 of the Farms and Markets Laws, Chapter 48, Laws of 1922, as amended).

Cans or other containers, other than bottles or jars in which milk or cream is sold, must be marked with the net contents; when sold from bulk, a sales slip must be furnished. Bottles or jars must be of the standard sizes provided for by law and need not be marked.
(Laws relating to Weights and Measures together with Rules and Regulations relating to the same, 1920).

NORTH DAKOTA

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures".* And they shall be made to contain their indicated capacities at a temperature of 20 degrees C (68 degrees F.).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over two inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, that a larger distance shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least half way around it, which indicates the correct capacity, and directly over, below, or beside this line, with the words, "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the table below:

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances.-The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary sub-multiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by the power of the number 2; Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

NORTH DAKOTA (Continued)

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/3 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Tolerances and Specifications for Weights and Measures and Weighing and Measuring Devices, 1919)

OHIO

19. Bottles used for the sale of milk or cream shall be made only in the sizes heretofore specified under the heading, "Liquid Capacity Measures," specification number 17. (1)

20. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in the side of the bottle, and in the side or bottom, the name, initials or trade mark of the manufacturer thereof.

21. Bottles with an inside diameter immediately below the cap or seat or stopple of not over two inches shall hold the correct capacity when filled within one-fourth inch of this cap seat or stopple; bottles with an inside diameter of over this amount immediately below the cap seat or stopple shall hold the correct capacity when filled within one-eighth inch of the cap seat or stopple

22. Where milk bottles are used for the purpose of pastuerizing milk in the bottle they shall be provided with a mark or graduation blown into the bottle, showing to what point the capacity of the bottle is indicated; also that it be clearly marked on the bottle that that bottle is intended for milk pastuerized in the bottle.

(1) Liquid measures of the customary system shall be of one of the following capacities, only: One gallon, a multiple of the gallon, or a binary sub-multiple of the gallon, i.e., a measure obtained by successively dividing the gallon by two. Provided, however, that nothing in this specification shall be construed to prevent the use of forms for ice cream exclusively, in 5 pint and three pint sizes, or bottles for milk or cream in the 3 pint size.

23. The following errors in excess and deficiency may be allowed on individual bottles, and on the average content of bottles, as noted in the column headings. The latter figure shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the average of these errors.

Capacity	Tolerance on Individual bottles		Tolerance on Average content.	
1/2 gallon	6 drams	1.4 cu. in.	1.5 drams	.35 cu.in.
3 pint	5 drams	1.2 cu. in.	1.25 drams	.29 cu.in.
1 quart	4 drams	.9 cu. in.	1.0 drams	.23 cu.in.
1 pint	3 drams	.7 cu. in.	.75 drams	.17 cu.in.
1/2 pint	2 drams	.5 cu. in.	.5 drams	.12 cu.in.
1 gill	2 drams	.5 cu. in.	.5 drams	.12 cu.in.

(Specifications and Tolerances for Weighing and Measuring Devices and Instructions to Sealers, Aug. 1, 1914)

OREGON

SPECIFICATIONS

1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures".*

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of the cap-seat or stopple: Provided, however, that when bottles are used for the purpose of pasteurizing milk or cream in the bottle, a larger distance shall be allowed below the cap-seat or stopple; but this distance shall not exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least half-way around it, which indicates the correct capacity. The words "For milk pasteurized in the bottle only" or a similar wording shall be clearly blown or otherwise clearly and permanently marked in or on the side of the bottle; and directly over, below, or beside the line mentioned above, the words, "Fill to this line". Such bottles shall be used only when the milk or cream is pasteurized in the bottle.

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2; provided, however, that nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

(Specifications governing the manufacture, sale and use of weighing and measuring apparatus in the State of Oregon, 1916).

Provided, That bottles or jars used for the sale of milk or cream shall be regarded and considered as measures within the meaning of this act, and shall be in all respects subject to all rules and regulations heretofore or hereafter made by the Chief of the Pennsylvania Bureau of Standards as to reasonable variations and tolerances.
(Laws, 1915, Act No. 236, part of Sec. 4).

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid capacity measures",* and they shall be made to contain their indicated capacities at a temperature of 20°C (68°F.).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, That a larger distance shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least halfway around it, which indicates the correct capacity, and directly over, below, or beside this line, with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the table below.

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

PENNSYLVANIA (Continued)

Tolerances.- The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
2 quarts	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Specifications and Tolerances issued by the State Bureau of Standards).

RHODE ISLAND

All milk, cream, and skimmed milk shall be sold only by standard wine measure, and by or in measures, cans, jars, bottles, or other vessels or receptacles which shall, prior to being used in such sale, be sealed by the manufacturer thereof as hereinafter provided, or by the sealer of weights and measures of the town where the person so using the same shall usually reside in this state, or of the town where such milk shall be sold for use; and every person selling any of the same contrary to this section or delivering any of the same contrary hereto, shall be fined for the first offence not less than twenty dollars and not exceeding fifty dollars, and for any subsequent offence not less than fifty dollars, or imprisonment not to exceed sixty days, or both such fine and imprisonment. Any purchaser of milk, cream, or skimmed milk, having reason to believe that any measure, can, jar, bottle, or other vessel or receptacle in which milk, cream, or skimmed milk is sold and delivered to him is not of sufficient size or capacity to contain, by standard wine measure, the amount thereof purchased, may apply to the sealer of weights and measures of the town in which such milk, cream or skimmed milk is delivered to him, which sealer shall, upon receipt of a fee of twenty-five cents therefor, test the capacity of the same and issue to such purchaser his certificate stating the capacity thereof; and if such capacity accordin

RHODE ISLAND (Continued)

to such certificate shall be less than the amount purchased such purchaser may make complaint and deliver such certificate to any officer of such town authorized to make complaints for the violation of this chapter, who thereupon shall duly make complaint against and prosecute the person or persons selling or delivering the same, for violation of this section. Upon the application of a manufacturer of a can, jar, bottle or other vessel or receptacle to be used in the sale of milk, cream or skimmed milk, the state sealer of weights, measures and balances may issue a license to such manufacturer to seal any such can, jar, bottle or other vessel or receptacle for use in this state. All such cans, jars, bottles, or other vessels or receptacles shall be sealed by the manufacturer thereof in such manner and in accordance with such regulations as the state sealer of weights, measures and balances may prescribe and shall be marked with the name, initials, or trade mark of the manufacturer, and by any other mark which the state sealer of weights, measures and balances may require. The state sealer of weights, measures and balances may revoke any such license at any time after giving the manufacturer holding such license ten days' notice of the proposed revocation. The sealing of any such can, jar,bottle, or other vessel or receptacle by a manufacturer shall not authorize the use of the same as legal measures nor shall any such sealing be held to affect the provisions of law relating to the giving of false measure, or the using of a false measure, or the having in possession a false measure with intent to use the same: Provided, however, that the wine measure as defined in this section shall permit a variation of one-half an ounce in the contents of glass bottles or jars.
(Gen. Laws, 1909, ch.173, p.575, Sec.1).

SOUTH DAKOTA

Bottles used for the sale of milk or cream shall be of the capacity of half gallon, three pints, one quart, one pint, one-half pint, one gill, filled full to the bottom of the lip or cap ring. The following variations on individual bottles or jars may be allowed, but the average contents of not less than twenty-five bottles selected at random from at least four times the number tested must not be in error by more than one quarter of the tolerances herein provided; six drams above and six drams below on the half gallon, five drams above and five drams below on the three pint; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two drams above and two drams below on the half pint; two drams above and two drams below on the gill. Bottles or jars used for the sale of milk shall have clearly blown or otherwise permanently marked in the side of the bottle the name, initial or the trademark of the manufacturer, and the capacity of the bottle or jar.

(Laws, 1919, ch.358, p.437, Sec.10).

TENNESSEE

(a) Specifications. Bottles used for the sale of milk or cream shall be made only in the sizes heretofore specified for liquid measures.*

(b) Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in the side of the bottle, and in the side or bottom, the name, initials or trade-mark of the manufacturer thereof.

(c) Bottles with an inside diameter immediately below the cap seat or stopple of not over two inches shall hold the correct capacity when filled within 1/4 inch of this cap seat or stopple; bottles with an inside diameter of over this amount immediately below the cap seat or stopple shall hold the correct capacity when filled within 1/8 inch of the cap seat or stopple.

(d) Bottles used for pasteurization, i.e., milk being pasteurized after being bottled, must be so marked as prescribed hereinbefore and may have capacity marked not more than one-half inch below cap seat or stopple when inside diameter immediately below cap seat or stopple is not over two inches; and one-fourth inch where inside diameter, etc., is over two inches.

(e) The following errors in excess and deficiency may be allowed on individual bottles, and on the average content of bottles, as noted in the column headings. The latter figure shall be determined by finding the error on each of not less than twenty-five bottles selected at random from at least four times the number tested, and taking the average of these errors.

Tolerances

Capacity	Tolerance on individual bottles		Tolerance on average contents	
1/2 gal.....	6 drams	1.4 cu.in.	1.5 drams	.35 cu.in.
3 pints.....	5 drams	1.2 cu.in.	1.25 drams	.29 cu.in.
1 quart.....	4 drams	.9 cu.in.	1.0 drams	.23 cu.in.
1 pint.....	3 drams	.7 cu.in.	.75 drams	.17 cu.in.
1/2 pint.....	2 drams	.5 cu.in.	.5 drams	.12 cu.in.
1 gill.....	2 drams	.5 cu.in.	.5 drams	.12 cu.in.

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, or a multiple of the gallon, or a binary sub-multiple of the gallon, i.e., a measure obtained by successively dividing the gallon by two. Provided, however, that nothing in this specification shall be construed to prevent the use of forms for ice cream exclusively in 5-pint and 3-pint sizes, or bottles for milk or cream in 3-pint sizes.

TENNESSEE (Continued)

(f) Testing. Test milk bottles in the same manner as liquid capacity measures, the bottle being filled up to within one-fourth or one-eighth inch (owing to diameter of bottle just below cap seat or stopple) below the cap seat or stopple.

(Rules and Regulations, July 1, 1914, Regulation 8).

TEXAS

The units or standards for the sale of milk in this State, from and after March 1st of this year (1920) shall be in the following divisions of the standard gallon, of two hundred thirty-one cubic inches, towit: the half gallon, the quart, the pint, the one-half pint and the gill, and it shall be unlawful for anyone to engage in the business of selling milk to the public generally in containers of any other divisions of the gallon, the half gallon, the quart, the pint, the half pint, and the gill measures.

(Order establishing standards for the sale of milk promulgated March 1, 1920).

VERMONT

Specifications. 1. Bottles used for the sale of milk or cream shall be made only in sizes heretofore specified under the heading "Liquid Capacity Measures",* and they shall be made to contain their indicated capacities at a temperature of 20°C(68°F).

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-fourth inch of this cap-seat or stopple; bottle with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, That a larger distance

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon, that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

VERMONT (Continued)

shall be allowed below the cap-seat or stopple when the bottles are provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, extending at least half-way around it, which indicates the correct capacity and directly over, below, or beside the line, with the words "Fill to line" or a similar and suitable inscription clearly and permanently marked in or on the bottle. The distance between the line herein mentioned and the cap-seat or stopple shall in no case exceed that given in the following table.

Capacity of bottle.	Maxiumum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances. The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(State of Vermont Laws Relating to Weights and Measures and Rules, Regulations and Tolerances, 1920).

VIRGINIA

Bottles used for the sale of milk or cream shall be of the capacity of one-half gallon, three pints, one quart, and one pint, one-half pint, and one gill. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle the capacity of the bottle and the word "sealed", and in the side or bottom of the bottle the name, initials, or trademark of the manufacturer, and a designating number, which designation shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the State superintendent of weights and measures upon application by the manufacturer, and upon the filing by the manufacturer of a bond in the sum of one thousand dollars, with sureties, to be approved by the attorney general, conditioned upon their conformance with the requirements of this section. A record of the bonds furnished and the designating numbers and to whom furnished shall be kept in the office of the superintendent of weights and measures.

Any manufacturer who sells or offers to sell milk or cream bottles to be used in the State that do not comply as to size and markings with the provisions of this section shall suffer a penalty of five hundred dollars, to be recovered by the attorney general in an action against the offender's bondsmen, to be brought in the name of the Commonwealth. Any dealer who uses, for the purpose of selling milk or cream, jars, or bottles purchased after this law takes effect that do not comply with the requirements of this section as to markings and capacity, shall be deemed guilty of using a false or insufficient measure.

Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as in this section provided, but they shall have the power to, and shall from time to time, make tests on individual bottles used by the various firms in the territory over which they have jurisdiction, in order to ascertain if the above provisions are being complied with, and they shall immediately report violations found to the State superintendent of weights and measures.

(Laws, 1924, ch. 316, sec. 23).

WASHINGTON

All milk, cream or buttermilk sold in the State of Washington, in bottles shall be sold only in bottles containing one-half pint, one pint, one quart, one-half gallon or one gallon standard liquid measure.
(Pierce's Code, 1921, Vol.1, p.2027, Sec.7260)

Specifications.-1. All milk, cream or buttermilk sold in the state of Washington, in bottles shall be sold only in bottles containing one-half pint, one pint, one quart, one-half gallon or one gallon standard liquid measure.

2. Each bottle shall have its capacity clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trade-mark of the manufacturer thereof.

3. Glass bottles with an inside diameter of not over 2 inches immediately below the cap-seat or stopple shall hold the correct capacity when filled within one-fourth inch of this cap-seat or stopple; bottles with an inside diameter of over this amount immediately below the cap-seat or stopple shall hold the correct capacity when filled to within one-eighth inch of this cap-seat or stopple: Provided, however, That when bottles are used for the purpose of pasteurizing milk or cream in the bottle, a larger distance shall be allowed below the cap-seat or stopple, but this distance shall not exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the bottle, and extending at least half-way around it, which indicates the correct capacity. The words "For milk pasteurized in the bottle only" or a similar wording shall be clearly blown or otherwise clearly and permanently marked in or on the side of the bottle; and directly over, below, or beside the line mentioned above, the words, "Fill to this line". Such bottles shall be used only when the milk or cream is pasteurized in the bottle.

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

4. Tolerances.- The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table:

WASHINGTON (Continued)

Capacity of bottle	Tolerance
	Drams
1 gallon	8
1/2 gallon	6
1 quart	4
1 pint	3
1/2 pint	2
1 gill	2

(Specifications Governing the Manufacture, Importation, Sale and Use of Commercial Weights and Measures and Weighing and Measuring Devices, 1916).

WEST VIRGINIA

Bottles used for the sale of milk or cream shall be of the capacity of one-half gallon, three pints, one quart, one pint, one-half pint, and one gill, when filled to within one-fourth of an inch of the cap seat or stopple in the case of those bottles having an inside diameter immediately below this cap seat or stopple of not over two inches. The following variations on individual bottles or jars may be allowed, but the average contents of not less than twenty-five bottles selected at random from at least four times the number tested must not be in error more than one-quarter of these tolerances; six drams above and six drams below on the half gallon, five drams above and five drams below on the three pints; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two drams above and two drams below on the gill. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle and the word "sealed"; and the side or bottom of the bottle the name, initial, or trademark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the state commissioner of weights and measures upon application by the manufacturer, and upon the filing by the manufacturer of a bond in the sum of one thousand dollars with sureties to be approved by the attorney general conditioned upon their conformance with the requirements of this section. A record of the bonds furnished, and the designating numbers and to whom furnished shall be kept in the office of the commissioner of weights and measures.

Any manufacturer who sells or offers to sell milk or cream bottles to be used in this state that do not comply as to size and markings with the provisions of this section shall suffer a penalty of five hundred dollars, to be recovered by the attorney general in an action against the defendant's bondsmen to be

WEST VIRGINIA (Continued)

brought in the name of the state of West Virginia. Any dealer who uses, for the purpose of selling milk or cream, jars or bottles, purchased after this law takes effect that do not comply with the requirements of this section as to markings and capacity, shall be deemed guilty of using a false and insufficient measure.

Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as in this section provided, but they shall have the power to and shall from time to time make tests on individual bottles used by various firms in the territory over which they have jurisdiction in order to ascertain if the above provisions are being complied with, and they shall immediately report violations found to the state commissioner of weights and measures.
(Sec. 3411 X, as amended by Acts, 1919, ch.53, page 224).

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8. Bottles used for the sale of milk or cream shall be made only in the sizes heretofore specified under the heading, "Liquid Capacity Measures",* specification number 2.

9. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle and the word "sealed"; and the side or bottom of the bottle the name, initial, or trademark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. This designating number will be furnished on application to the Commissioner of Weights and Measures.

10. Bottles with an inside diameter immediately below the cap seat or stopple of not over two inches shall hold the correct capacity when filled within one-fourth inch of this cap seat or stopple; bottles with an inside diameter of over this amount immediately below the cap seat or stopple shall hold the correct capacity when filled within one-eighth inch of the cap seat or stopple.

11. Where milk bottles are used for the purpose of pasteurizing milk in the bottle they shall be provided with a mark or graduation blown into the bottle, showing to what point the capacity of the bottle is indicated; also that it be clearly marked on the bottle that that bottle is intended for milk pasteurized in the bottle.

*Liquid measures of the customary system shall be of one of the following capacities only: One gallon, a multiple of the gallon, or a binary submultiple of the gallon; that is, a measure obtained by dividing the gallon by the number 2 or by a power of the number 2: Provided, however, That nothing in this specification shall be construed to prevent the use of forms for ice cream, exclusively, in 5-pint and 3-pint sizes, or bottles for milk or cream in the 3-pint size.

WEST VIRGINIA (Continued)

12. The following errors in excess and deficiency may be allowed on individual bottles, and on the average content of bottles, as noted in the column headings. The latter figure shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the average of these errors.

Capacity	Tolerance on individual bottles		Tolerance on average content	
1/2 gallon	6 drams	1.4 cu.in.	1.5 drams	.35 cu.in.
3 pint	5 drams	1.2 cu.in.	1.25 drams	.29 cu.in.
1 quart	4 drams	.9 cu.in.	1.0 drams	.23 cu.in.
1 pint	3 drams	.7 cu.in.	.75 drams	.17 cu.in.
1/2 pint	2 drams	.5 cu.in.	.5 drams	.12 cu.in.
1 gill	2 drams	.5 cu.in.	.5 drams	.12 cu.in.

Testing:- Test milk bottles in the same manner as liquid capacity measures, the bottle being filled according to specification number 10 as given above.

Sealing:- Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as is in section 9 provided, but they shall have the power to and shall from time to time make tests on individual bottles used by various firms in the territory over which they have jurisdiction in order to ascertain if the above provisions are being complied with, and they shall immediately report violations found to the state commissioner of weights and measures; provided, however, that these sections shall not apply except to farmers and dairymen who own and milk ten or more cows.
(Rules and Regulations for the guidance of County and City Sealers of Weights and Measures, Circular No. 2, 1915).

WISCONSIN

Bottles used for the sale of milk and cream shall be of the capacity of half gallon, three pints, one quart, one pint, half pint, one gill filled full to the bottom of the cap seat, stopple, or other designating mark. The following variations on individual bottles or jars may be allowed, but the average contents of not less than twenty-five bottles selected at random from at least four times the number tested must not be in error by more than one quarter of the tolerances; six drams above and six drams below on the half gallon; five drams above and five drams below on the three pint; four drams above and four drams below on the quart; three drams above and three drams below on the pint; two drams above and two drams below on the half pint; two drams above and two drams below on the gill. When milk or cream is pasteurized in the bottle in which it is to be sold or delivered, such bottle may have a capacity sufficient to permit of the expansion of the contents in

the process of heating, but such bottle shall have clearly marked thereon by a line or other designating mark the point to which su bottle is filled when containing the respective capacities provided for in this section, at sixty-eight degrees Fahrenheit (twenty degrees Centigrade). The state superintendent of weights and measures shall prescribe and adopt such rules and regulations as he may deem necessary to carry out the provisions of this section. Bottles or jars used for the sale of milk or cream shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle and the word "Sealed" and in the side or bottom of the bottle the name, initials or the trade-mark of the manufacturer and designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the state superintendent of weights and measures upon application by the manufacturer, and upon filing by the manufacturer of a bond in the sum of one thousand dollars with sureties to be approved by the attorney-general, conditioned upon their conformance with the requirements of this section. A record of the bonds furnished, the designating numbers, and to whom furnished, shall be kept in the office of the superintendent of weights and measures.

Any manufacturer who sells milk or cream bottles to be used in this state that do not comply as to size and markings with the provisions of this section shall suffer the penalty of five hundred dollars, to be recovered by the attorney-general in an action against the offender's bondsmen, to be brought in the name of the people of the state. Any dealer who uses, for the purpose of selling milk or cream, jars or bottles purchased after this law takes effect that do not comply with the requirements of this section as to markings and capacity, shall be deemed guilty of using false or insufficient measure.

Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as in this section provided, but they shall from time to time make tests on individual bottles used by the various firms in the territory over which they have jurisdiction, in order to ascertain whether the above provisions are being complied with, and they shall report violations found immediately to the superintendent of weights and measures.
(Stats., 1917, ch.76, p.1286, sec. 1666 a).

Specifications.-1. Bottles used for the sale of milk or cream shall be made only in the following sizes: 1/2 gallon, 3 pints, 1 quart, 1 pint, 1/2 pint, 1 gill.

2. Each bottle shall have its capacity and the word "Sealed" clearly blown or otherwise clearly and permanently marked in or on the side of the bottle, and in or on the side or bottom the name, initials, or trademark of the manufacturer and designating number

WISCONSIN (Continued)

3. Glass bottles shall hold the correct capacity within the tolerances prescribed by law when filled to the cap seat or stopple. Provided, however, that when bottles are used for the purpose of pasteurizing milk or cream in the bottle the correct capacity of the bottle may be some distance below the cap seat or stopple, but this distance shall not exceed that given in the table below. Such bottles shall be provided with a clearly defined line blown or otherwise clearly and permanently marked in or on the side of the bottle and extending at least half way around it which indicates the correct capacity of the bottle to that point at a temperature of 68° F. (20° Centigrade). Directly over, below or beside this line the words "Fill to Line" or a similar and suitable inscription, shall be clearly and permanently marked in or on the bottle.

Capacity of bottle.	Maximum distance allowable. Inches.
2 quarts	2
3 pints	1 3/4
1 quart	1 1/2
1 pint	1
1/2 pint	5/8
1 gill	5/8

Tolerances.- The tolerances to be allowed in excess or deficiency on individual bottles, and on the average capacity of bottles, shall not be greater than the values shown in the following table. The error on the average capacity of bottles shall be determined by finding the error on each of not less than 25 bottles selected at random from at least four times the number tested, and taking the algebraic mean of these errors.

Capacity of bottle	Tolerance on individual bottles		Tolerance on average capacity	
	Drams	Cubic Inches	Drams	Cubic Inches
1/2 gallon	6	1.4	1.5	0.35
3 pints	5	1.2	1.25	.29
1 quart	4	.9	1.0	.23
1 pint	3	.7	.75	.17
1/2 pint	2	.5	.5	.12
1 gill	2	.5	.5	.12

(Revised Tolerances and Specifications on Weights and Measures and Weighing and Measuring Devices, November 1920).