USDA United States Department of Agriculture
Foreign Agricultural Service

GAIN Global Agricultural Information Network

Voluntary Report – Voluntary - Public Distribution **Date:** June 10, 2025

Report Number: CH2025-0129

Report Name: National Food Safety Standard on Microbiological Examination of Foods Coliforms Count

Country: China - People's Republic of

Post: Beijing

Report Category: FAIRS Subject Report, Sanitary/Phytosanitary/Food Safety

Prepared By: FAS China Staff

Approved By: Adam Branson

Report Highlights:

On March 27, 2025, the PRC released the National Food Safety Standard on Microbiological Examination of Foods Coliforms Count. This updated standard applies to the testing and counting of coliforms in foods. The final standard will enter into force on September 16, 2025. At the time of this report, the PRC has not notified the WTO of this revised standard. This report provides an unofficial translation of the final standard. Stakeholders should conduct their own review of the regulations to assess any market or regulatory effect on their business.

FAS China provides this analysis and reporting as a service to the United States agricultural community, and to our farmers, ranchers, rural communities, and agribusiness operations in support of a worldwide agricultural information system and a level playing field for U.S. agriculture.

Report Summary:

On March 27, 2025, The People's Republic of China (PRC's) National Health Commission (NHC) and the State Administration for Market Regulation (SAMR) jointly released the National Food Safety Standard on Microbiological Examination of Foods Coliforms Count (GB 4789.3-2025) (link in Chinese).

The updated standard applies to the testing and counting of coliform bacteria in foods. The final standard will enter into force on September 16, 2025, and replaces the current implementing standard GB 4789.3-2016, which was implemented since June 2017. At the time of the report, the PRC hasn't notified the WTO of the revised standard.

This report provides an unofficial translation of the final standard. Stakeholders should conduct their own review of the regulations to assess any market or regulatory effect on their business.

BEGIN TRANSLATION

National Food Safety Standard Microbiological Examination of Foods Coliforms Count

Foreword

This standard replaces GB 4789.3-2016 "National Food Safety Standard Microbiological Examination of Foods Coliforms Count." Compared with GB 4789.3-2016, the main changes in this standard are as follows:

- Deleted the testing principles;
- Revised terms and definitions;
- Modified the contents for equipment, materials, culture medium, and reagents;
- Modified the testing procedures, operation steps, results and reports, and appendixes.

1. Scope

This standard specifies the method for counting coliforms in foods.

Method I of this standard is applicable to the counting of coliforms in foods with low content of coliforms; Method II is applicable to the counting of coliforms in foods with high content of coliforms.

2. Terms and Definitions

2.1 Coliforms

A Gram-negative, non-spore-forming bacillus that can ferment lactose, produce acid and gas under certain culture conditions.

2.2 Most probable number (MPN) technique

A quantitative testing method combining statistics and microbiology. After the sample to be tested is serially diluted and cultured, the most probable number of coliform bacteria in the sample to be tested is calculated by applying statistical probability theory according to the lowest dilution at which no growth occurs and the highest dilution at which growth occurs.

3. Equipment and Materials

In addition to the conventional sterilization and culture equipment in the microbiology laboratory, other equipment and materials are as follows.

3.1 Constant temperature incubator: 36°C±1°C,30°C±1°C.

3.2 Refrigerator: 2°C~8°C.

3.3 Thermostatic device: 48°C±2°C.

3.4 Balance: sensitivity 0.1g.

3.5 Homogenizer, sterile homogenization bag, homogenization cup, and oscillator.

3.6 Test tube: 15 mm x 150 mm, 18 mm x180 mm or other suitable specifications, and small inverted tube (Duchenne tube) or other suitable gas collection device.

3.7 Sterile pipette: 1 mL (with 0.01 mL scale), 2 mL (with 0.02 mL scale), 5 ml (with 0.05 mL scale), 10 mL (with 0.1 mL scale) or micropipette and sterile tip.

3.8 Sterile conical flask: with a capacity of 500 mL.

3.9 Sterile culture dish: 90 mm in diameter.

3.10 pH meter or precision pH test paper.

3.11 Aseptic inoculation ring: 10 μL with 3mm in diameter.

3.12 Magnifying glass or colony counter

4. Culture Medium and Reagent

4.1 Phosphate buffer: see A.1 in Appendix A.

4.2 Saline: See A.2.

4.3 Lauryl Sulfate Tryptone (LST) broth: See A.3.

4.4 Brilliant Green Lactose Bile Salt (BGLB) broth: See A.4.

4.5 Crystal Violet Neutral Red Bile Agar (VRBA): See A.5.

4.6 1 mol/L NaOH: SeeA.6.

4.7 1 mol/L HCl: See A.7.

4.8 Coliform count testing piece (the positive result should be determined based on the acid and gas production of lactose fermentation, and the performance should meet the quality requirements of relevant culture medium in GB 4789.28).

Method I: Coliforms MPN Counting Method

5. Testing Procedures

The testing procedure of coliform MPN counting method is shown in Fig 1.

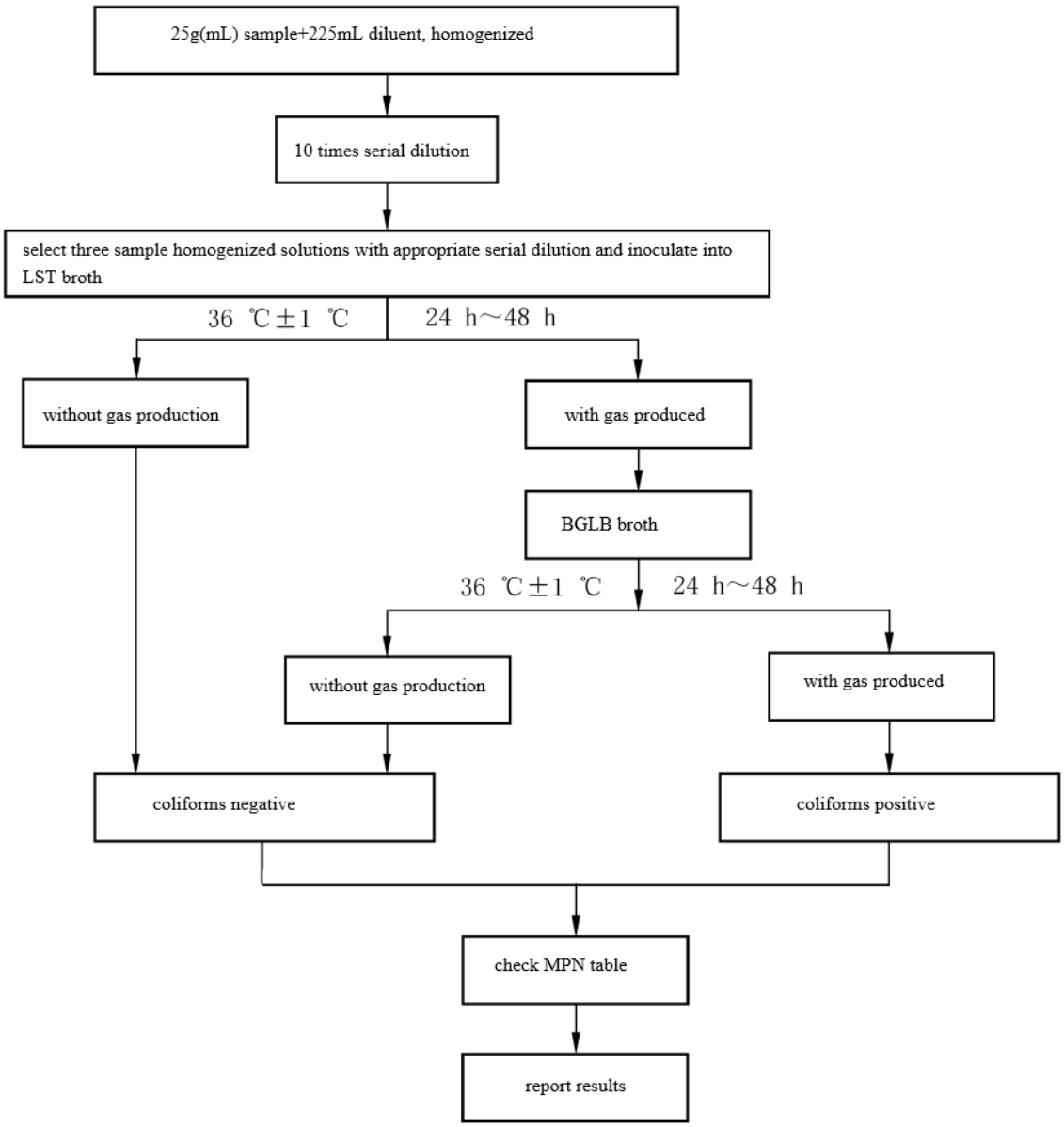

Fig. 1: Test procedure for coliform MPN counting method

6. Operation Steps

6.1 Dilution of samples

6.1.1 Solid and semi-solid samples: in sterile operation, weigh 25 g of sample, put it into a sterile homogenization cup containing 225 mL of phosphate buffer or saline, and homogenize it at 8,000 r/min~10,000 r/min for 1 to 2 minutes; Or put it into a sterile homogenization bag

containing 225 mL phosphate buffer or saline, and beat it with a tapping homogenizer for 1 to 2 minutes to make a 1:10 sample homogenization solution.

6.1.2 Liquid sample: use a sterile straw to absorb 25 mL of sample, put it into a sterile conical bottle containing 225 mL phosphate buffer or saline (appropriate number of sterile glass beads can be preset in the bottle), and mix it well, or put it into a sterile homogenization bag containing 225 mL phosphate buffer or saline, and tap it for 1 to 2 minutes with a slapping homogenizer to make a 1:10 sample homogenization solution. When the sample is not suitable for volume sampling, operate according to 6.1.1.

6.1.3 If necessary, adjust the pH of sample homogenization solution or liquid sample stock solution to 6.5~7.5 with 1 mol/L NaOH or 1 mol/L HCl.

6.1.4 Absorb 1 mL of 1:10 homogenization solution sample with a sterile pipette or micropipette, slowly inject it into a sterile test tube containing 9 mL of phosphate buffer or saline along the tube wall (the pipette or the tip of the pipette should not touch the dilution liquid level), shake and mix the test tube on a shaker to make a 1:100 sample homogenization solution.

6.1.5 Based on the estimated contamination status of the samples, prepare a series of diluted samples in 10-fold increments according to the procedures outlined in 6.1.4. Use a new sterile pipette or tip for each dilution.

6.2 Preliminary fermentation test

For each sample, select 3 suitable consecutive dilutions of the sample homogenate (for liquid samples, the original solution can be selected). Inoculate 3 tubes of LST broth for each dilution, adding 1mL of sample homogenate to each tube of LST broth (if the inoculation volume exceeds 1mL, add it to an equal volume of double-strength LST broth). The entire process from preparing the sample homogenate to inoculating it into the LST broth must not exceed 15 minutes. Place the inoculated LST broth tubes at temperature of 36°C ± 1°C for incubation for 24h ± 2h and check for gas production. If there are bubbles generated in the small-inverted tube or gas collection device, or if gentle shaking of the LST broth tube shows fine bubbles continuously rising in the test tube, this is diagnosed as gas production, and those producing gas should undergo the re-fermentation test (confirmation test). If there is no gas production, continue incubating for 48h ± 2h and check for gas production again; those producing gas should undergo the confirmatory re-fermentation test. If after 48h ± 2h incubation, there is still no gas production, it is concluded that the sample is coliforms negative. If after 48h ± 2h, none of the LST broth tubes produced gas, report the MPN value of the coliforms per gram (milliliter) of sample according to the MPN table in Appendix B, expressed as MPN/g (mL).

6.3 Re-fermentation test (confirmation test)

Gently shake the LST broth tubes that produce gas, take 1 loopful of culture with the inoculation loop respectively, transfer it into BGLB broth tubes, culture at temperature of 36℃ ± 1℃ for 24 h ± 2 h, and check the gas production status. If gas is produced, it is judged as positive for coliforms; if no gas is produced, continue incubating for another 48 hours ± 2 hours and check again, if gas is produced, it is judged as positive for coliforms; if still no gas is produced, it is judged as negative for coliforms.

7. Results and Reports

According to the number of tubes with positive coliform bacteria in the three appropriate continuous dilutions in the re-fermentation test (if there are more than three continuous dilutions determine the optimal three continuous dilutions according to Appendix C), report the MPN value of coliform bacteria per gram (milliliter) of sample, in MPN/g (mL), based on the MPN lookup table in Appendix B.

Method II: Coliforms Plate Counting Method

8. Testing Procedures

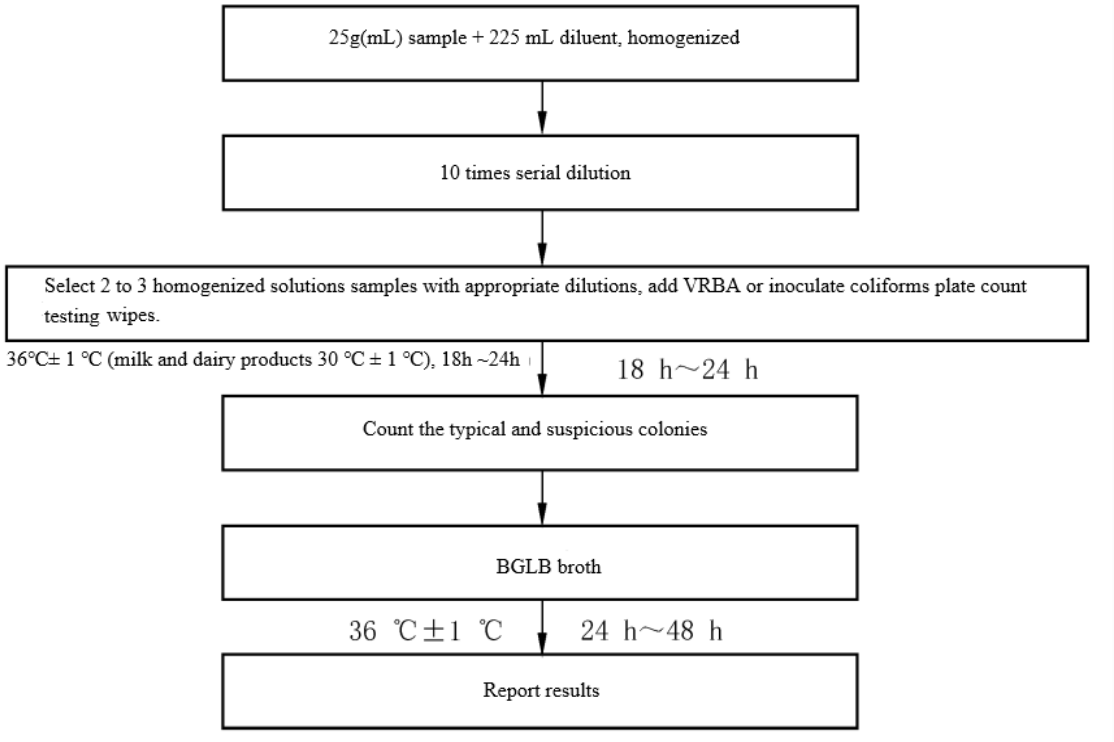

Fig. 2: Testing procedure of coliform plate counting method

9. Operational Steps

9.1 Dilution of samples

According to 6.1.

9.2 Inoculation and culture

9.2.1 Based on estimation of contamination status of samples, select 2 to 3 appropriate homogenization solution samples with continuous dilution levels (the original liquid can be used for liquid samples), inoculating two sterile culture dishes for each dilution level, with 1mL in each dish. At the same time, take phosphate-buffered saline or physiological saline to add to 2 sterile petri dishes as control, with 1 mL in each dish.

9.2.2 Pour the VRBA cooled to 48℃ ± 2℃ into petri dishes as soon as possible, 15 mL~20 mL in each dish. Carefully rotate the petri dish, fully mix the culture medium with the inoculated homogenization solution sample and set it aside horizontally to wait for it to solidify. The whole process from the preparation of sample homogenization solution to the end of VRBA addition shall not exceed 15 minutes. After the agar has solidified, cover 3mL to 4mL VRBA evenly to the whole surface of the plate. After the coated agar solidified, turn the plate over and incubate it at temperature of 36 ℃± 1 ℃ for 18 to 24 hours. For milk and dairy products, it should be incubated at temperature of 30℃ ± 1℃ for 18 to 24 hours.

9.2.3 If coliform count test wipe is used, follow its instructions.

9.3 Selection of plate colony number

9.3.1 Observe and count the colonies and use a magnifying glass or colony counter when necessary. Select all plates with a colony count between 15 CFU and 150 CFU and count the typical and suspicious coliform colonies on the plates respectively. Typical colonies are red to purplish red, with a red precipitation ring around, and the diameter of the colony is generally greater than 0.5 mm. Suspicious colonies are red to purplish red, and the diameter of the colony is generally less than 0.5 mm.

9.3.2 If the colony count of the plate with two dilutions is between 15 CFU and 150 CFU and the colony number of other cases is selected, the provisions of Appendix D shall be followed.

9.4 Confirmation test

Pick five typical and suspicious colonies from the VRBA plate with the same dilution respectively. If there are less than five typical or suspicious colonies, pick all the colonies. Inoculate 1 tube of BGLB broth for each colony, at 36°C ± 1°C for 24 ± 2 hours, and check for gas production. If gas is produced, it is positive for coliform bacteria; if no gas is produced, continue incubating for 48 ± 2 hours and observe again. If gas is produced, it is positive for coliform bacteria; if still no gas is produced, it is negative for coliform bacteria.

10. Results and Reports

10.1 The average sum of the typical colonies and suspected colonies at the selected dilution levels multiplied by their respective positive rates for coliforms, multiplied by the dilution factor, gives the colony count for coliforms. When the colony count of coliforms is less than 100 CFU, it is rounded according to the principle of “rounding off” and reported as an integer. When the colony count of coliforms is greater than or equal to 100 CFU, the third digit is rounded according to the “rounding off” principle, retaining the first two digits and replacing the following digits with 0; it may also be expressed in scientific notation, rounded according to the “rounding off” principle, while retaining two significant digits. Appendix D specifies the calculation of coliform colony counts, the rounding of values, and the reporting of results, and provides relevant examples.

10.2 If there is colony grown on the blank control, the test result is invalid.

10.3 Weight sampling results are reported in CFU/g, while volume sampling results are reported in CFU/mL.

Appendix A

Culture Medium and Reagents

A.1 Phosphate Buffer

A. 1.1 Composition

Potassium dihydrogen phosphate: 34.0g

Distilled water: 500 mL

A. 1.2 Preparation method

Storage solution: weigh 34.0 g of potassium dihydrogen phosphate and dissolve it in 500 mL of distilled water (or other qualified experimental water, the same below), adjust the pH to 7.2 ± 0.2 with about 175 mL of 1 mol/L sodium hydroxide solution, dilute it to 1,000 mL with distilled water, and seal and store it in a refrigerator. Working solution: take 1.25 mL of storage solution, dilute it to 1,000 mL with distilled water, dispense it in a suitable container, autoclave at 121℃ for 15 minutes, and set aside as sample dilution.

A. 2 Saline

A. 2.1 Composition

Sodium chloride: 8.5 g
Distilled water: 1,000 mL

A. 2.2 Preparation

Dissolve sodium chloride in distilled water and autoclave at 121℃ for 15 minutes.

A. 3 Lauryl sulfate tryptone (LST) broth

A. 3.1 Composition

Tryptone	20.0g
Sodium chloride	5.0g
Lactose	5.0g
Dipotassium phosphate	2.75g
Potassium dihydrogen phosphate	2.75g
Sodium lauryl sulfate	0.1g
Distilled water	1000 mL

A. 3.2 Preparation method

Add all ingredients (except distilled water for double-ingredient LST broth, double the amount of other ingredients) to distilled water and heat to dissolve, adjust pH if necessary. Dispense into test tubes with small-inverted tubes, 10 mL per tube. Autoclave at 121°C for 15 minutes, after sterilization, the pH of the culture medium is 6.8±0 at 25°C.

A. 4 Brilliant green lactose bile salt (BGLB) broth

A. 4.1 Composition

Peptone	10.0 g
Lactose	10.0 g
Bilein	20.0g
Brilliant green	0.0133 g
Distilled water	1 000 mL

A. 4.2 Preparation method

Heat and dissolve the components in distilled water and adjust the pH if necessary. Dispense them into tubes with small-inverted tubes, with 10mL per tube. Autoclave at 121 ℃ for 15 minutes, after sterilization, the pH of the medium is 7.2 ± 0.2 at 25 ℃.

A. 5 Crystal violet neutral red bile salt agar (VRBA)

B. 5.1 Composition

Peptone	7.0 g
Yeast extract powder	3.0g
Lactose	10.0 g
Sodium chloride	5.0g
Bile salt or No.3 bile salt	1.5g
Neutral red	0.03g
Crystal violet	0.002g
Agar	15.0 g~18.0 g
Distilled water	1000 mL

A. 5.2 Preparation method

Add each component into distilled water, heat it while stirring until it is completely dissolved, and adjust the pH if necessary. Boil it for sterilization, and the boiling time shall not exceed 2 minutes. The medium should be poured into the plate within 24 hours. The pH of the medium is 7.4 ± 0.2 at 25℃ after boiling.

A.6. 1 mol/L NaOH

A. 6.1 Composition

Sodium hydroxide	40.0g
Distilled water	1 000 mL

A. 6.2 Preparation method

Weigh 40 g of sodium hydroxide and dissolve in 1, 000 mL of distilled water.

A.7 1 mol/L HCl

A. 7.1 Composition

Concentrated hydrochloric acid	89 mL
Distilled water	1 000 mL

A. 7.2 Preparation method

Measure 89 mL of concentrated hydrochloric acid and dilute it to 1,000 mL with distilled water.

Appendix B

Key to Most Probable Number (MPN) of Coliforms in Foods

The most probable number (MPN) of coliforms in food samples per gram (mL) is as shown in table B.1.

Table B.1: Key to the most probable number (MPN) of coliforms in foods

Number of positive tubes			MPN	95% confidence limit		Number of positive tubes			MPN	95% confidence limit	
0.1	0.01	0.001		Lower limits	Upper limits	0.1	0.01	0.001		Lower limits	Upper limits
0	0	0	<3.0	-	9.5	2	2	0	21	4.5	42
0	0	1	3.0	0.15	9.6	2	2	1	28	8.7	94
0	1	0	3.0	0.15	11	2	2	2	35	8.7	94
0	1	1	6.1	1.2	18	2	3	0	29	8.7	94
0	2	0	6.2	1.2	18	2	3	1	36	8.7	94
0	3	0	9.4	3.6	38	3	0	0	23	4.6	94
1	0	0	3.6	0.17	18	3	0	1	38	8.7	110
1	0	1	7.2	1.3	18	3	0	2	64	17	180
1	0	2	11	3.6	38	3	1	0	43	9	180
1	1	0	7.4	1.3	20	3	1	1	75	17	200
1	1	1	11	3.6	38	3	1	2	120	37	420
1	2	0	11	3.6	42	3	1	3	160	40	420
1	2	1	15	4.5	42	3	2	0	93	18	420
1	3	0	16	4.5	42	3	2	1	150	37	420
2	0	0	9.2	1.4	38	3	2	2	210	40	430
2	0	1	14	3.6	42	3	2	3	290	90	1 000
2	0	2	20	4.5	42	3	3	0	240	42	1 000
2	1	0	15	3.7	42	3	3	1	460	90	2 000
2	1	1	20	4.5	42	3	3	2	1 100	180	4 100
2	1	2	27	8.7	94	3	3	3	>1 100	420	-

Note 1: This table uses three dilution levels, and for each of which, it inoculates 3 tubes. The sample volume of each tube in the three dilution levels is 0.1g (mL), 0.01g (mL) and 0.001 g (mL), respectively.

Note 2: When the sample volume inoculated in three dilution levels is changed to 1g (mL), 0.1g (mL) and 0.01g (mL), the values in the table should be reduced by 10 times accordingly; If 0.01 g (mL), 0.001 g (mL) and 0.000 1 g (mL) are used, the values in the table should be expanded by 10 times accordingly, and so on.

Note 3: If necessary, the values in this table can be multiplied by 100 to report the most probable number of coliforms in every 100 g (mL) sample, expressed in MPN/100 g (mL).

Appendix C

Determine Three Most Suitable Continuous Dilutions Methods

Taking the MPN counting method with 5 continuous dilutions ranging from 10^{-1}~10^{-5} as an example, determine the most suitable 3 continuous dilutions according to the following method, as shown in Table C.

C.1 One or more dilutions that all three tubes are positive

Select the highest dilution with positive results in all three tubes and its two connected higher dilutions (see Table C.1 Examples a and b); if there are positive results in the higher dilutions that have not been selected, move to the next three higher continuous dilutions in sequence (see Table C.1 Example c). If there are positive results in the higher dilutions that have not been selected, add these positive results to the selected highest dilution, and then determine the three continuous dilutions (see Table C.1 Example d); if three suitable dilutions cannot be found according to this rule, start from the previous lower dilution and select three continuous dilutions (see Table C.1 Example e).

C.2 No dilution with all three positive tubes

Select the three lowest dilutions (see Example f in Table C.1); if there are positive results at higher dilutions that have not been selected, add all positive results to the selected highest dilution, and then determine three continuous dilutions (see Example g in Table C.1).

Table C.1: Example of methods for determining the three most suitable continuous dilutions

Example Number	Sample size for vaccination/g (mL)					The number of positive tubes selected for the three consecutive dilutions	MPN/ g(mL)
	0.1	0.01	0.001	0.000 1	0.000 01		
a	3	3	1	0	0	x310x	430
b	2	3	1	0	0	x310x	430
c	3	2	2	1	0	x221x	280
d	3	2	2	1	1	x222x	350
e	3	3	3	3	2	xx332	110 000
f	0	1	0	0	0	010xx	3.0
g	2	2	0	1	1	222xx	35

Appendix D

Processing and Examples of Plate Count Results for Coliforms

Taking solid samples as an example, the selection, confirmation, calculation and reporting of the coliform plate count are as follows.

D.1 The number of colonies on the plate with only one dilution is within the counting range. See Table D.1 for examples of counting result processing.

Table D.1: Example of Processing for Plate Count Results of Coliforms (Part 1)

Dilution	1:10		1:100	
All colony counts on the plate	80	68	8	6
Typical colony count on the plate	60	55	-	-
Suspicious colony count on the	18	10	-	-
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	115	28	-	-
Positive ratio (numbers of positive cases /numbers of confirmed colonies)	4/5	3/5	-	-

Select two plates with the same dilution ratio and the number of colonies within the counting range, count the typical colonies and suspicious colonies respectively, and randomly select 5 typical colonies and 5 suspicious colonies on the two plates for confirmation test. After multiplying the product of the number of typical colonies and its positive ratio, add the product of the number of suspicious colonies and its positive ratio, take the average value and multiply it by the dilution multiple, and report the result after rounding according to the principle of "rounding off". The example of result calculation and result report is as follows:

Result calculation:

$$\frac{(115\times 4/5+28\times 3/5)\times 10}{2} = 544$$

Result report: 540 CFU/g or 5.4×10^2 CFU/g

D.2 There are two consecutive dilutions of agar plates with bacterial counts within the counting range, among which only one plate with the second lowest dilution has colony counts within the counting range. The processing example of the counting results is shown in Table D.2.

Table D.2: Example of Processing for Plate Count Results of Coliforms (Part 2)

Dilution	1:100		1:1 000	
All colony counts on the plate	110	103	16	8
Typical colony count on the plate	54	50	7	-
Suspicious colony count on the	55	51	9	-
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	104	106	7	9
Positive ratio (numbers of positive cases /numbers of confirmed	4/5	2/5	3/5	2/5

Count the typical and suspicious colonies on each dilution of plate within the counting range and randomly select 5 typical and 5 suspicious colonies at each dilution for confirmation test. Divide the sum of coliform colonies on the selected plates by the sum of the sample size inoculated on the selected plate and report the results after rounding according to the principle of "rounding off." The example of result calculation and report is as follows:

Result calculation:

$$\frac{104\times 4/5+106\times 2/5+7\times 3/5+9\times 2/5}{0.01\times 2+0.001\times 1} = 6\ 352.4$$

Result report: 6 400 CFU/g or 6.4×10^3 CFU/g.

D.3 The number of colonies on the plate with the lowest dilution is below the counting range. See Table D.3 for an example of processing the counting results.

Count the typical colonies and suspicious colonies on the two plates with the lowest dilution respectively and randomly select 5 typical colonies and 5 suspicious colonies (select all colonies if there are less than 5) for confirmation test. After multiplying the product of the number of typical colonies and their positive ratio, add the product of the number of suspicious colonies and their positive ratio, take the average value and multiply it by the dilution factor, and report the result after rounding according to the principle of "rounding off." The example of result calculation and result report is as follows:

Table D.3: Example of Processing for Plate Count Results of Coliforms (Part 3)

Dilution	1:10		1:100	
All colony counts on the plate	6	3	0	0
Typical colony count on the plate	3	1	-	-
Suspicious colony count on the	3	2	-	-
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	4	5	-	-
Positive ratio (numbers of positive cases/ numbers of confirmed colonies)	3/1	2/5	-	-

Result calculation:

$$\frac{(4\times 3/4+5\times 2/5)\times 10}{2}=25$$

Result report: 25 CFU/g.

D.4 The colony count of the plate with the lowest dilution is higher than the counting range, and the colony count of the plate with the second lowest dilution is lower than the counting range. See Table D.4 for an example of processing the counting results.

Table D.4: Example of Processing for Plate Count Results of Coliforms (Part 4)

Dilution	1:10		1:100	
All colony counts on the plate	158	156	13	12
Typical colony count on the plate	43	40	-	-
Suspicious colony count on the	112	114	-	-
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	83	226	-	-
Positive ratio (numbers of positive cases/ numbers of confirmed colonies)	5/5	2/5	-	-

Select the dilution with the colony average closest to 15CFU or 150CFU, count the typical colonies and suspicious colonies of this dilution, and randomly select 5 typical colonies and 5 suspicious colonies for confirmation test. After multiplying the product of the typical colony count and its positive ratio, add the product of the suspicious colony count and its positive ratio, take the average value and multiply it by the dilution multiple, and report the result after

rounding according to the principle of “rounding off.” The example of result calculation and result report is as follows:

Result calculation:

$$\frac{(83\times 5/5+226\times 2/5)\times 10}{2} = 867$$

Result report: 870 CFU/g or 8.7×10^2 CFU/g

D.5 If no typical or suspicious colonies grow on the plates of all dilutions, the result is calculated as less than 1 multiplied by the lowest dilution factor. See Table D.5 for examples of counting result processing.

Table D.5: Example of Processing for Plate Count Results of Coliforms (Part 5)

Dilution	1:10		1:100	
All colony counts on the plate	0	0	0	0
Typical colony count on the plate	0	0	-	-
Suspicious colony count on the	0	0	-	-
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	-	-	-	-
Positive ratio (numbers of positive cases/numbers of confirmed colonies)	-	-	-	-

Result report: <10 CFU/g.

D.6 The number of colonies on the plates of selected dilution is within the counting range, but there is no positive result for coliform in the confirmation test. The result is calculated as less than 1 multiplying the lower dilution multiple of the selected dilution. An example of counting result processing is shown in Table D.6.

Table D.6: **Example of Processing for Plate Count Results of Coliforms (Part 6)**

Dilution	1:10		1:100	
All colony counts on the plate	142	136	17	18
Typical colony count on the plate	0	0	0	0
Suspicious colony count on the	140	134	17	18
Morphology classification of colony to be confirmed	Typical colony	Suspicious colony	Typical colony	Suspicious colony
Total colony by classification to be confirmed	0	274	0	35
Positive ratio (numbers of positive cases/numbers of confirmed colonies)	-	0/5	-	0/5

Result report: <10 CFU/g.

END OF TRANSALTION

Attachments:

GB 4789.3-2025 Coliforms.pdf