

Water testing for *E. coli* and Coliform

EC Blue-MPN plate 「Nissui」

The product is individually packed, and sterilized by γ -rays to be used directly after opening

[Component]

- EC Blue-MPN plate
 - MPN plate main frame
 - MPN plate lid
 - MPN calibration scale

[Directions]

- ① EC Blue solution (100mL) is prepared using a watery sample and EC Blue 100/100P.
- ② The EC Blue solution is poured into the slope of an MPN plate. After each well (10, 1, 0.1mL) is filled, excess of the EC Blue solution is pooled into fluid reservoir.
- ③ The MPN plate is covered with a lid, then incubated at 35-37°C for 24 h.
- ④ After incubation, fluorescence is observed in wells by irradiating with a UV-lamp from above, when *E. coli* exists in a sample. On the other hand, blue color is observed in wells, when coliforms exist in a sample.

[Determination]

The total cell number is determined from the MPN calibration scale.

[Purpose]

A quantitative testing for *E. coli* (MPN testing using specific enzyme substrate-containing medium) was introduced as an official testing method for index bacterium of *Cryptosporidium* in tap water.

[Warning and Direction for Use]

1. General precautions

- 1) Read and follow precisely the warning and direction for use described on the package insert and/or label.
- 2) EC Blue solution is carefully poured into a slope of MPN plate to keep the solution from overflowing.
- 3) After incubation, MPN plate is gently treated to avoid a contamination among each of wells.
- 4) MPN plate is only for one-time use.

2. Precautions for danger

- 1) When media touched eyes or mouth, immediately wash with plenty of water, and consult a physician.

- 2) Manipulations with microorganisms always involve certain risks of laboratory-acquired infections. Manipulations should be done under the supervision of trained specialists with biohazard protection measures.

3. Precautions for disposal of waste

Any media, materials and apparatus after use must be sterilized by autoclaving or boiling water and then dispose as medical or industrial waste according to the Law on Waste Disposal and Cleaning.

[Storage]

Keep dry at room temperature.

[Package]

EC Blue-MPN plate 「Nissui」

Main frame and lid / 1 unit

1 unit × 18 / 1 package <sterilized> Code 06517

[Further information]

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ECブルーMPNプレート 最確数法(MPN)表 (裏へ続く)

陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit			陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit			陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit		
10m L	1m L	0.1m L	M P N	95% 信頼限界 95% confidence limit		10m L	1m L	0.1m L	M P N	95% 信頼限界 95% confidence limit		10m L	1m L	0.1m L	M P N	95% 信頼限界 95% confidence limit	
				下限 lower	上限 upper					下限 lower	上限 upper					下限 lower	上限 upper
				0	0					0	0						
0	0	1	1.8	0.23	14	1	0	1	4.0	0.94	17	2	0	1	6.8	2.1	22
0	0	2	3.6	0.80	16	1	0	2	6.0	1.7	21	2	0	2	9.1	3.1	27
0	0	3	5.4	1.5	20	1	0	3	8.1	2.6	25	2	0	3	12	4.1	32
0	0	4	7.2	2.3	23	1	0	4	10	3.5	29	2	0	4	14	5.2	37
0	0	5	9.0	3.1	27	1	0	5	12	4.4	34	2	0	5	16	6.2	43
0	1	0	1.8	0.24	14	1	1	0	4.0	0.95	17	2	1	0	6.8	2.1	22
0	1	1	3.6	0.81	16	1	1	1	6.1	1.8	21	2	1	1	9.2	3.1	27
0	1	2	5.5	1.5	20	1	1	2	8.1	2.7	25	2	1	2	12	4.2	32
0	1	3	7.3	2.3	23	1	1	3	10	3.6	29	2	1	3	14	5.2	38
0	1	4	9.1	3.1	27	1	1	4	12	4.5	34	2	1	4	17	6.3	44
0	1	5	11	3.9	31	1	1	5	14	5.4	39	2	1	5	19	7.3	50
0	2	0	3.7	0.82	16	1	2	0	6.1	1.8	21	2	2	0	9.3	3.2	27
0	2	1	5.5	1.5	20	1	2	1	8.2	2.7	25	2	2	1	12	4.2	33
0	2	2	7.4	2.3	23	1	2	2	10	3.6	29	2	2	2	14	5.3	38
0	2	3	9.2	3.1	27	1	2	3	12	4.5	34	2	2	3	17	6.4	44
0	2	4	11	3.9	31	1	2	4	15	5.4	39	2	2	4	19	7.4	51
0	2	5	13	4.7	35	1	2	5	17	6.3	44	2	2	5	22	8.4	58
0	3	0	5.6	1.6	20	1	3	0	8.3	2.7	25	2	3	0	12	4.3	33
0	3	1	7.4	2.3	23	1	3	1	10	3.6	30	2	3	1	14	5.4	39
0	3	2	9.3	3.2	27	1	3	2	13	4.6	34	2	3	2	17	6.5	45
0	3	3	11	4.0	31	1	3	3	15	5.5	39	2	3	3	20	7.5	52
0	3	4	13	4.8	35	1	3	4	17	6.4	44	2	3	4	22	8.5	59
0	3	5	15	5.6	40	1	3	5	19	7.3	50	2	3	5	25	9.4	67
0	4	0	7.5	2.4	20	1	4	0	11	3.7	30	2	4	0	15	5.5	39
0	4	1	9.4	3.2	27	1	4	1	13	4.6	35	2	4	1	17	6.5	45
0	4	2	11	4.0	31	1	4	2	15	5.6	40	2	4	2	20	7.6	52
0	4	3	13	4.8	36	1	4	3	17	6.5	45	2	4	3	23	8.6	60
0	4	4	15	5.6	40	1	4	4	19	7.3	51	2	4	4	25	9.5	68
0	4	5	17	6.4	45	1	4	5	22	8.2	56	2	4	5	28	10	76
0	5	0	9.4	3.2	28	1	5	0	13	4.7	35	2	5	0	17	6.6	46
0	5	1	11	4.1	32	1	5	1	15	5.6	40	2	5	1	20	7.7	53
0	5	2	13	4.9	36	1	5	2	17	6.5	45	2	5	2	23	8.7	60
0	5	3	15	5.7	40	1	5	3	19	7.4	51	2	5	3	26	9.6	69
0	5	4	17	6.5	45	1	5	4	22	8.3	57	2	5	4	29	11	78
0	5	5	19	7.2	50	1	5	5	24	9.1	64	2	5	5	32	11	87

* Note: The MPN calibration scale is based on the program developed in 1985 by Hurley & Roscoe. This program makes provision for the reliability coefficient to evaluate the reliability of data. In case that the combination of positive number indicates <9 of the reliability coefficient, MPN is valid. On the other hand, in case of >9, MPN may not be valid by some sort of error cause. MPN indicated in italic letter should be handled as a reference value because of >9.

注意：本最確数表は1985年にHurley & Roscoeが開発した計算プログラムに基づいています。同プログラムでは、信頼度係数というデータ信頼性を判断する基準を設けてその係数が9未満の陽性管数の組み合わせはそのまま最確数として採用できますが、信頼度係数が9以上の場合は何らかの誤差要因の可能性があると定義しています。イタリックで表記してあるMPNについては信頼度係数が9以上のため参考値としてご参照下さい。

ECブルーMPNプレート 最確数法(MPN)表

陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit			陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit			陽性管数 positive number			100m L中の最確数と信頼限界 MPN in 100 mL & confidence limit		
10m L	1m L	0.1m L	MPN	95% 信頼限界 95% confidence limit		10m L	1m L	0.1m L	MPN	95% 信頼限界 95% confidence limit		10m L	1m L	0.1m L	MPN	95% 信頼限界 95% confidence limit	
				下限 lower	上限 upper					下限 lower	上限 upper					下限 lower	上限 upper
3	0	0	7.8	2.5	24	4	0	0	13	4.7	35	5	0	0	23	8.8	61
3	0	1	11	3.7	30	4	0	1	17	6.3	44	5	0	1	31	11	87
3	0	2	13	5.0	36	4	0	2	21	7.9	54	5	0	2	43	14	130
3	0	3	16	6.2	44	4	0	3	25	9.5	67	5	0	3	58	18	180
3	0	4	20	7.5	51	4	0	4	30	11	83	5	0	4	76	25	230
3	0	5	23	8.7	60	4	0	5	36	12	100	5	0	5	95	33	280
3	1	0	11	3.8	30	4	1	0	17	6.4	45	5	1	0	33	12	92
3	1	1	14	5.1	37	4	1	1	21	8.1	56	5	1	1	46	15	140
3	1	2	17	6.3	44	4	1	2	26	9.7	69	5	1	2	63	20	200
3	1	3	20	7.6	52	4	1	3	31	11	85	5	1	3	84	28	250
3	1	4	23	8.8	61	4	1	4	36	13	100	5	1	4	110	37	300
3	1	5	27	10	72	4	1	5	42	14	130	5	1	5	130	47	350
3	2	0	14	5.1	37	4	2	0	22	8.2	57	5	2	0	49	16	150
3	2	1	17	6.4	45	4	2	1	26	9.9	71	5	2	1	70	22	220
3	2	2	20	7.7	53	4	2	2	32	11	88	5	2	2	94	32	280
3	2	3	24	8.9	62	4	2	3	38	13	110	5	2	3	120	43	330
3	2	4	27	10	73	4	2	4	44	15	130	5	2	4	150	55	400
3	2	5	31	11	85	4	2	5	50	16	160	5	2	5	180	66	470
3	3	0	17	6.5	45	4	3	0	27	10	73	5	3	0	79	26	240
3	3	1	21	7.8	54	4	3	1	33	12	91	5	3	1	110	38	310
3	3	2	24	9.1	64	4	3	2	39	13	110	5	3	2	140	52	380
3	3	3	28	10	74	4	3	3	45	15	140	5	3	3	170	66	470
3	3	4	31	11	86	4	3	4	52	17	160	5	3	4	210	80	560
3	3	5	35	12	100	4	3	5	59	19	190	5	3	5	250	93	680
3	4	0	21	7.9	55	4	4	0	34	12	94	5	4	0	130	47	360
3	4	1	24	9.2	65	4	4	1	40	14	120	5	4	1	170	65	460
3	4	2	28	10	76	4	4	2	47	15	140	5	4	2	220	83	590
3	4	3	32	12	88	4	4	3	54	17	170	5	4	3	280	100	760
3	4	4	36	13	100	4	4	4	61	20	190	5	4	4	350	120	1000
3	4	5	40	14	120	4	4	5	69	22	220	5	4	5	430	140	1300
3	5	0	25	9.3	66	4	5	0	47	14	120	5	5	0	240	89	640
3	5	1	29	11	77	4	5	1	48	16	150	5	5	1	350	12	1000
3	5	2	32	12	90	4	5	2	56	18	180	5	5	2	540	160	1800
3	5	3	37	13	100	4	5	3	64	20	200	5	5	3	920	290	2900
3	5	4	41	14	120	4	5	4	72	23	220	5	5	4	1600	540	4800
3	5	5	45	15	140	4	5	5	81	27	240	5	5	5	≥2400		

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