

3-dilution, 5-tube Multiple Tube Fermentation (MTF) Method:

Most Probable Number (MPN) Table

Ref: IS 1622:2026, Cl. 4.3.4 Computing & Recording of MPN, Annex C Table-26.

MPN index and 95% confidence limits for various combinations of positive results when five tubes are used in a row for each dilution namely; Row-1: 10-ml, Row-2: 1.0 ml and Row-3: 0.1 ml test portions.

No. Of tubes giving a positive reaction:			MPN / 100 ml	Confidence Interval, 95%	
Row 1: 10ml	Row 2: 1ml	Row 3: 0.1 ml		Lower	Upper
0	0	0	<1.8	BDL	6.8
0	0	1	1.8	0.09	6.8
0	1	0	1.8	0.09	6.9
0	1	1	3.6	0.70	10
0	2	0	3.7	0.70	10
0	2	1	5.5	1.8	15
0	3	0	5.6	1.8	15
1	0	0	2.0	0.10	10
1	0	1	4.0	0.70	10
1	0	2	6.0	1.8	15
1	1	0	4.0	0.71	12
1	1	1	6.1	1.8	15
1	1	2	8.1	3.4	22
1	2	0	6.1	1.8	15
1	2	1	8.2	3.4	22
1	3	0	8.3	3.4	22
1	3	1	10	3.5	22
1	4	0	11	3.5	22
2	0	0	4.5	0.79	15
2	0	1	6.8	1.8	15
2	0	2	9.1	3.4	22
2	1	0	6.8	1.8	14
2	1	1	9.2	3.4	22
2	1	2	12	4.1	26
2	2	0	9.3	3.4	22
2	2	1	12	4.1	26
2	2	2	14	5.9	36
2	3	0	12	4.1	26
2	3	1	14	5.9	36
2	4	0	15	5.9	36
3	0	0	7.8	2.1	22

No. Of tubes giving a positive reaction:			MPN / 100 ml	Confidence Interval, 95%	
Row 1: 10ml	Row 2: 1ml	Row 3: 0.1 ml		Lower	Upper
3	0	1	11	3.5	23
3	0	2	13	5.6	35
3	1	0	11	3.5	26
3	1	1	14	5.6	36
3	1	2	17	6.0	36
3	2	0	14	5.7	36
3	2	1	17	6.8	40
3	2	2	20	6.8	40
3	3	0	14	6.8	40
3	3	1	21	6.8	40
3	3	2	24	9.8	70
3	4	0	21	6.8	40
3	4	1	24	9.8	70
3	5	0	25	9.8	70
4	0	0	13	4.1	35
4	0	1	17	5.9	36
4	0	2	21	6.8	40
4	0	3	25	9.8	70
4	1	0	17	6.0	40
4	1	1	21	6.8	42
4	1	2	26	9.8	70
4	1	3	31	10	70
4	2	0	22	6.8	50
4	2	1	26	9.8	70
4	2	2	32	10	70
4	2	3	38	14	100
4	3	0	27	9.9	70
4	3	1	33	10	70
4	3	2	39	14	100
4	4	0	34	14	100
4	4	1	40	14	100

No. Of tubes giving a positive reaction:			MPN / 100 ml	Confidence Interval, 95%	
Row 1: 10ml	Row 2: 1ml	Row 3: 0.1 ml		Lower	Upper
4	4	2	47	15	120
4	5	0	41	14	100
4	5	1	48	15	120
5	0	0	23	6.8	70
5	0	1	31	10	70
5	0	2	43	14	100
5	0	3	58	22	150
5	1	0	33	10	100
5	1	1	46	14	120
5	1	2	63	22	150
5	1	3	84	34	220
5	2	0	49	15	150
5	2	1	70	22	170
5	2	2	94	34	230
5	2	3	120	36	250
5	2	4	150	58	400

No. Of tubes giving a positive reaction:			MPN / 100 ml	Confidence Interval, 95%	
Row 1: 10ml	Row 2: 1ml	Row 3: 0.1 ml		Lower	Upper
5	3	0	79	22	220
5	3	1	110	34	250
5	3	2	140	52	400
5	3	3	170	70	400
5	3	4	210	70	400
5	4	0	130	36	400
5	4	1	170	58	400
5	4	2	220	70	440
5	4	3	280	100	710
5	4	4	350	100	710
5	4	5	430	150	1100
5	5	0	240	70	710
5	5	1	350	100	1100
5	5	2	540	150	1700
5	5	3	920	220	2600
5	5	4	1600	400	4600
5	5	5	>1600	700	-

MPN index and 95% confidence limits for various combinations of positive results when five tubes are used in a row for each dilution namely; Row-1: 10-ml, Row-2: 1.0 ml and Row-3: 0.1 ml test portions.
