

UNDERSTANDING ISO PARTICLE COUNTS

Example

SIZE (MICRONS)	COUNT LARGER THAN SIZE PER mL
4	2136
6	463
10	161
14	63
20	29
50	6
75	2
100	1

ISO 4406:99
R₄/R₆/R₁₄

2136 particles >= 4 microns/mL

463 particles >= 6 microns/mL

63 particles >= 14 microns/mL

MORE THAN	UP TO AND INCLUDING	RANGE NUMBER (R)
80000	160000	24
40000	80000	23
20000	40000	22
10000	20000	21
5000	10000	20
2500	5000	19
1300	2500	18
640	1300	17
320	640	16
160	320	15
80	160	14
40	80	13
20	40	12
10	20	11
5	10	10
2.5	5	9
1.3	2.5	8
0.64	1.3	7
0.32	0.64	6
0.16	0.32	6
0.08	0.16	4
0.04	0.08	3
0.02	0.04	2
0.01	0.02	1

A sample is given a fluid cleanliness rating using the table to the right. To do this, the number of particles equal to or larger than three size ranges (4, 6 and 14 microns) are determined in the equivalent of one millilitre of sample.

In the example shown, the particle count distribution shown translates to an ISO rating of 18/16/13 using the corresponding Range Number (R).