



ISO Particle Counts

Understanding ISO Particle Counts

Example Particle Count	
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 > 4µm/ml

463 particles > 6µm/ml

63 particles > 14µm/ml

≡ ISO 18/16/13

Numbers of Particles per ml		
More Than	Up To and Including	Range Number (R)
80,000	160,000	24
40,000	80,000	23
20,000	40,000	22
10,000	20,000	21
5,000	10,000	20
2,500	5,000	19
1,300	2,500	18
640	1,300	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	5
0.08	0.16	4
0.04	0.08	3
0.02	0.04	2
0.01	0.02	1

Under ISO 4406:99, a sample is given a fluid cleanliness rating using the above table. To do this, the number of particles greater than three size ranges, (4, 6 and 14 microns) are determined in the equivalent of one milliliter of sample. In the above example, the particle count distribution shown in the table on the left translates to an ISO 4406:99 rating of 18/16/13.