

Selection Guide

Membrane Selection

Protein Applications

MWCO	Biomolecule Molecular Weight
1K, yellow	3K-10K
3K, gray	10K-20K
10K, blue	30K-90K
30K, red	90K-180K
100K, clear	300K-900K

Nucleic Acid Applications

MWCO	Base Pairs (DS)	Bases (SS)
1K, yellow	5-16 Bp	9-32 Bs
3K, gray	16-32 Bp	32-65 Bs
10K, blue	50-145 Bp	95-285 Bs
30K, red	145-285 Bp	285-570 Bs
100K, clear	475-1,450 Bp	950-2,900 Bs

Select Device and Final Concentrate

Nanosep® Centrifugal Device

Concentration selection guide for Nanosep Centrifugal Devices

Maximum Centrifuge Speed: 14,000 x g (protein) 5,000 x g (nucleic acids)
Maximum Sample Volume: 500 µL

Concentration Factor (Fold)	Starting Sample Volume (µL)	Volume Added to Collection Tube (µL)	Final Retentate Volume (µL)
2	200	572	100
3	200	530	67
4	200	508	50
5	200	496	40
6	200	487	33
10	200	470	20
20	200	457	10
25	200	455	8
2	300	536	150
3	300	472	100
4	300	440	75
5	300	421	60
6	300	408	50
10	300	383	30
20	300	364	15
25	300	360	12
2	400	500	200
3	400	415	133
4	400	372	100
5	400	347	80
6	400	330	67
10	400	296	40
20	400	270	20
25	400	265	16

The above table shows what buffer volume should be added to the collection tube under the insert to achieve desired concentration factors for 200, 300 and 400 µL starting sample volumes in the insert.

For example highlighted above, If you would like to concentrate 200 µL of starting material by ten fold (see highlight in table), the buffer volume to be added to the collection tube would be 470 µL, leaving 20 µL of concentrated material in the retentate.

Microsep™ Advance Centrifugal Device

Concentration selection guide for Microsep Advance Centrifugal Devices

Maximum Centrifuge Speed: 7,500 x g (protein and nucleic acid)
Maximum Sample Volume: 5 mL

Concentration Factor (Fold)	Starting Sample Volume (mL)	Volume Added to Collection Tube (mL)	Final Retentate Volume (mL)
2	3.00	6.69	1.50
3	3.00	5.76	1.00
4	3.00	5.29	0.75
5	3.00	5.02	0.60
6	3.00	4.83	0.50
10	3.00	4.46	0.30
20	3.00	4.18	0.15
25	3.00	4.12	0.12
4	4.00	4.76	1.00
5	4.00	4.39	0.80
6	4.00	4.14	0.667
10	4.00	3.64	0.40
20	4.00	3.27	0.20
25	4.00	3.19	0.16
4	5.00	4.23	1.25
5	5.00	3.76	1.00
6	5.00	3.45	0.833
10	5.00	2.83	0.50
20	5.00	2.36	0.25
25	5.00	2.27	0.20

The above table shows what buffer volume should be added to the collection tube under the insert to achieve desired concentration factors for 3, 4 and 5 mL starting sample volumes in the insert.

For example highlighted above, If you would like to concentrate 4 mL of starting material by five-fold (see highlight in table), the buffer volume to be added to the collection tube would be 4.39 mL, leaving 0.8 mL of concentrated material in the retentate.

