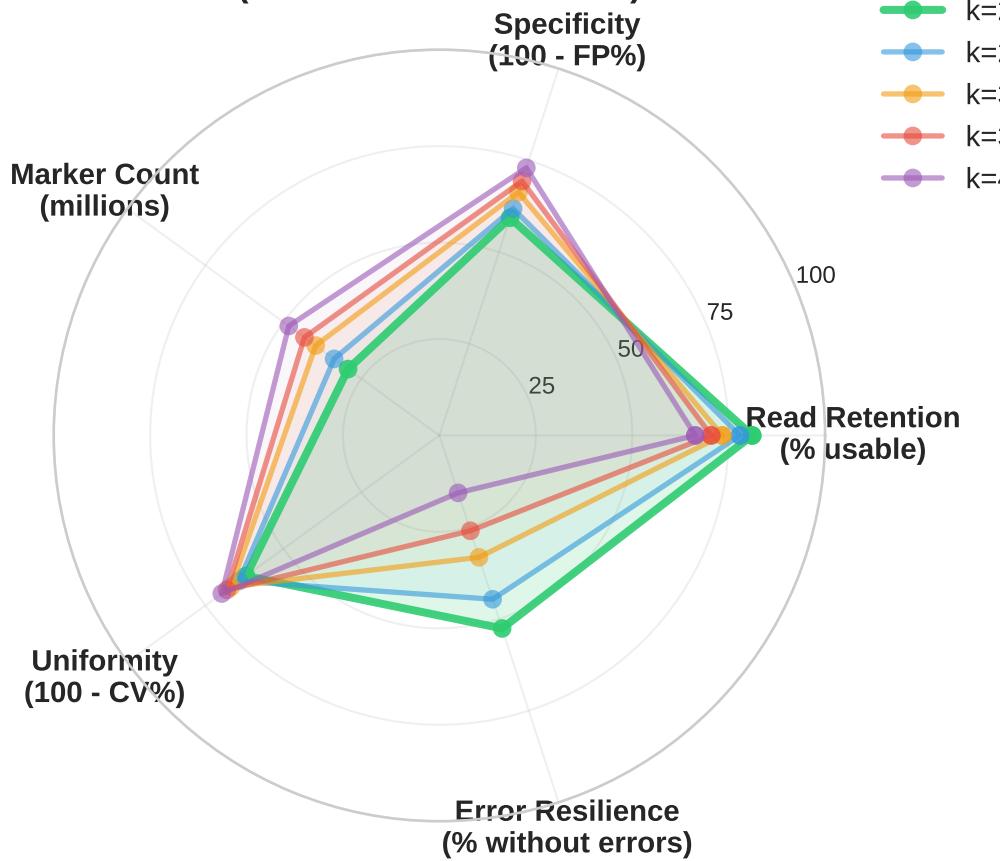


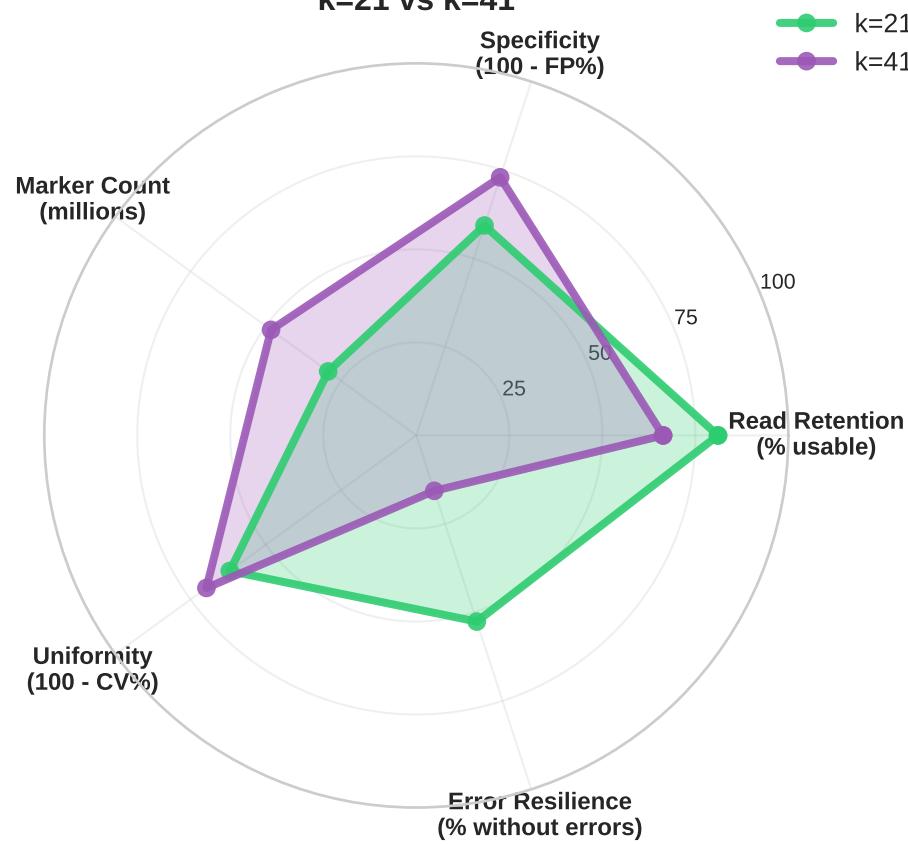
Multi-Dimensional K-mer Performance Comparison

Radar Chart Analysis Across 5 Key Dimensions

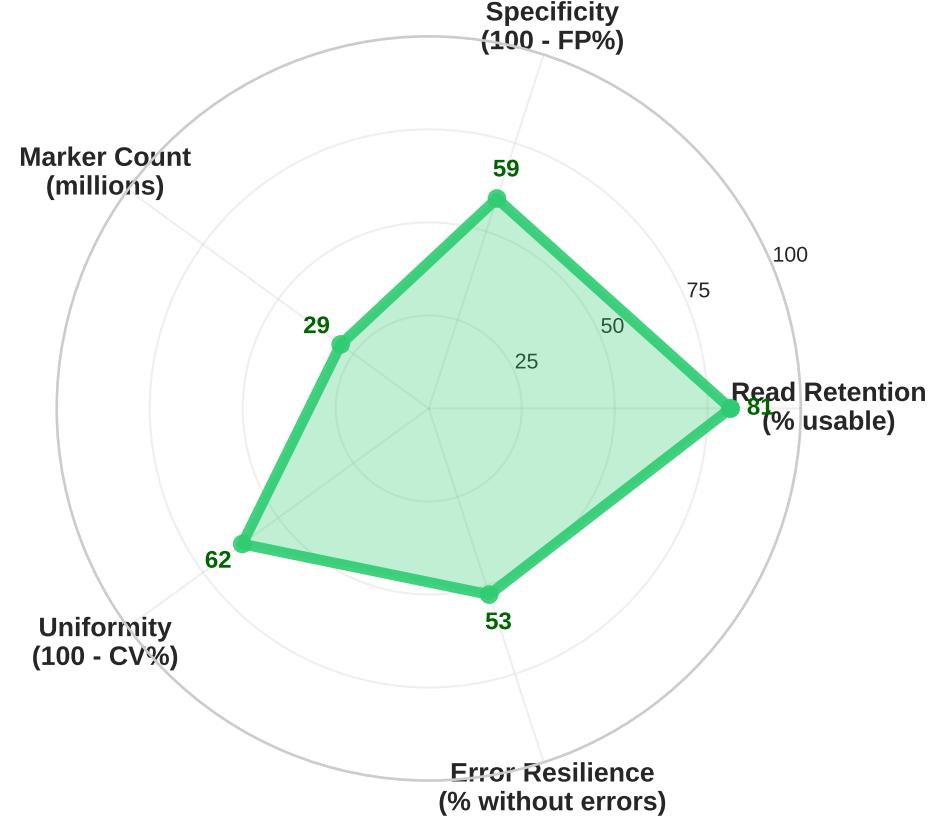
**A. All K-mer Sizes Comparison
(Normalized 0-100 scale)**



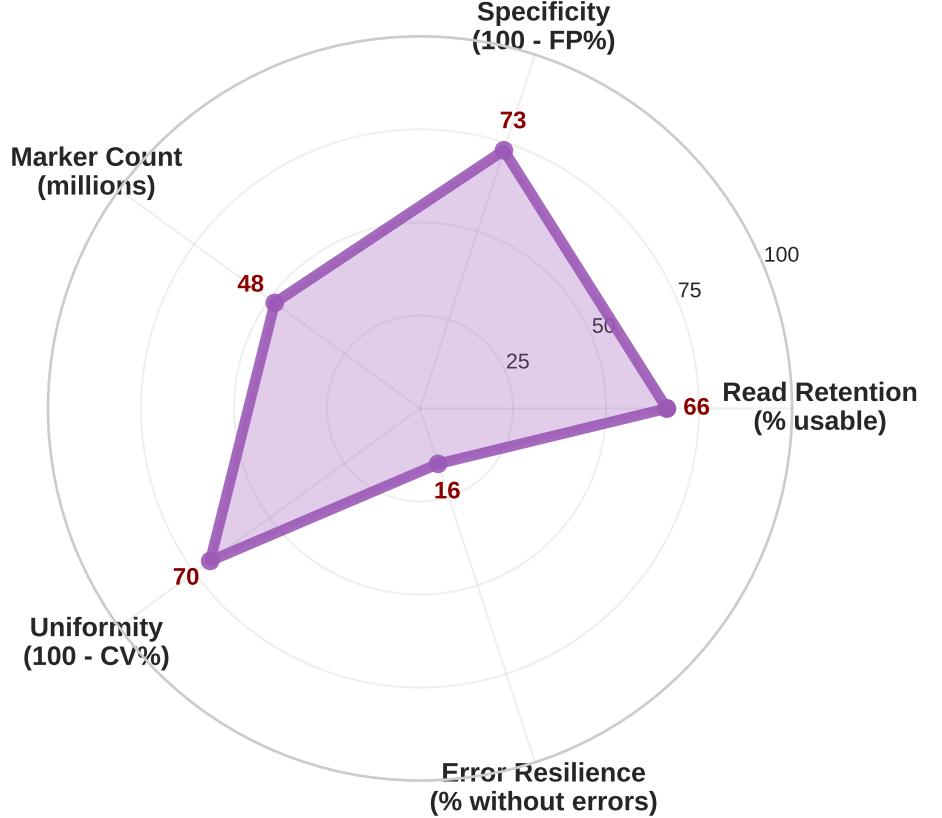
**B. Head-to-Head
k=21 vs k=41**



**C. k=21 Profile
RECOMMENDED**



**D. k=41 Profile
Not Recommended**



**E. Performance Summary
k=21 vs k=41**

Metric	k=21	k=41	Winner
Read Retention	81.1%	66.3%	k=21
Specificity	99.837%	99.892%	k=41
Markers (M)	1.76	2.90	k=41
Uniformity	62.0%	69.7%	k=41
Error Resilience	81.0%	66.3%	k=21
Overall Winner	k=21		3-2