

MP5k

Summary

General

fastp version:	0.19.4 (https://github.com/OpenGene/fastp)
sequencing:	paired end (151 cycles + 151 cycles)
mean length before filtering:	151bp, 151bp
mean length after filtering:	149bp, 149bp
duplication rate:	74.374236%
Insert size peak:	0

Before filtering

total reads:	453.384920 M
total bases:	68.461123 G
Q20 bases:	63.744042 G (93.109840%)
Q30 bases:	58.425170 G (85.340653%)
GC content:	42.911627%

After filtering

total reads:	357.742182 M
total bases:	53.563194 G
Q20 bases:	52.015417 G (97.110372%)
Q30 bases:	48.860784 G (91.220819%)
GC content:	42.467044%

Filtering result

reads passed filters:	357.742182 M (78.904738%)
reads with low quality:	89.822196 M (19.811465%)
reads with too many N:	3.128000 K (0.000690%)
reads too short:	5.800056 M (1.279279%)
reads with low complexity:	17.358000 K (0.003829%)

Adapters

Adapter or bad ligation of read1

The input has little adapter percentage (~0.375866%), probably it's trimmed before.

Sequence	Occurrences
A	56958
AG	49523
AGA	58535
AGAT	49225
AGATC	

	54200
AGATCG	54072
AGATCGG	46361
AGATCGGA	50737
AGATCGGAA	47812
AGATCGGAAG	45480
AGATCGGAAGA	46259
AGATCGGAAGAG	45414
AGATCGGAAGAGC	43585
AGATCGGAAGAGCA	47242
AGATCGGAAGAGCAC	52328
AGATCGGAAGAGCACA	44095
AGATCGGAAGAGCACAC	44532
AGATCGGAAGAGCACACG	42765
AGATCGGAAGAGCACACGT	37145
AGATCGGAAGAGCACACGTC	39114
AGATCGGAAGAGCACACGTCT	37509
AGATCGGAAGAGCACACGTCTG	37161
AGATCGGAAGAGCACACGTCTGA	37603
AGATCGGAAGAGCACACGTCTGAA	38478
AGATCGGAAGAGCACACGTCTGAAC	36665
AGATCGGAAGAGCACACGTCTGAACT	36063
AGATCGGAAGAGCACACGTCTGAACTC	38698
AGATCGGAAGAGCACACGTCTGAACTCCAGTCAC	34961
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGC	37527
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAAT	36683
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTT	87332
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAA	99174
other adapter sequences	1946575

Adapter or bad ligation of read2

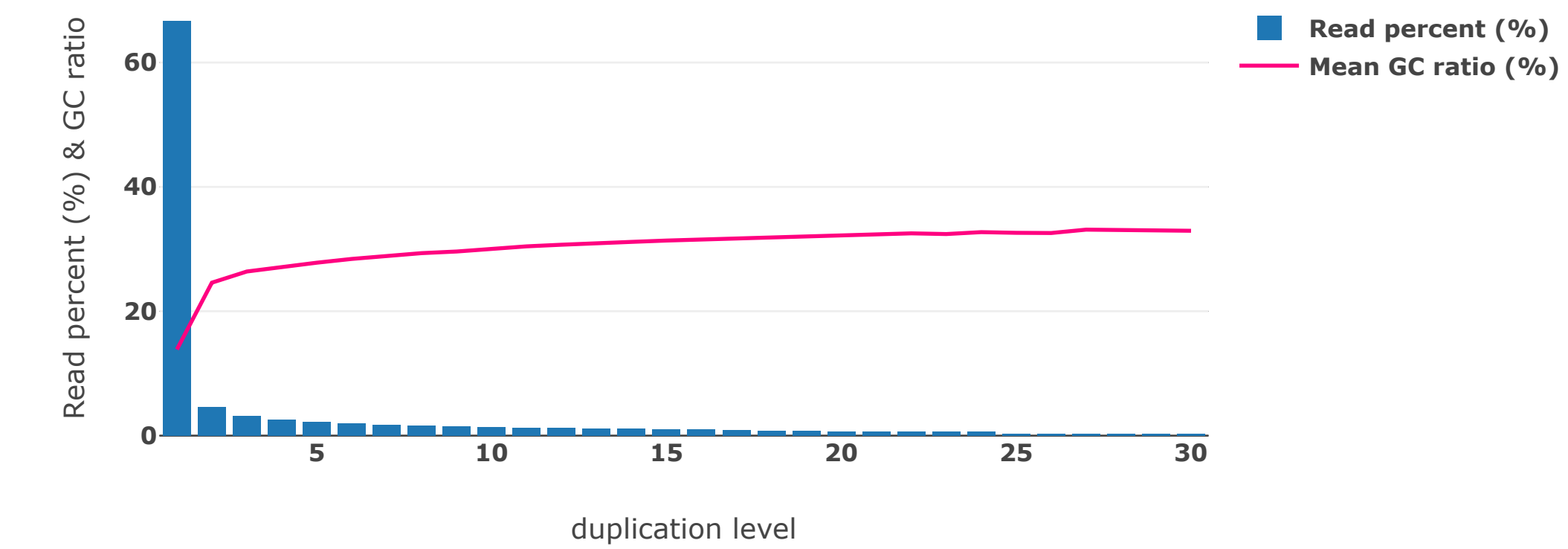
The input has little adapter percentage (~0.324043%), probably it's trimmed before.

Sequence	Occurrences
A	56970
AG	48608
AGA	56469
AGAT	52027
AGATC	58050
AGATCG	54989
AGATCGG	49997
AGATCGGA	51546
AGATCGGAA	47511

AGATCGGAAG	47070
AGATCGGAAGA	52389
AGATCGGAAGAG	48470
AGATCGGAAGAGC	47525
AGATCGGAAGAGCG	53741
AGATCGGAAGAGCGT	41847
AGATCGGAAGAGCGTC	55526
AGATCGGAAGAGCGTCG	49605
AGATCGGAAGAGCGTCGT	44108
AGATCGGAAGAGCGTCGTG	44463
AGATCGGAAGAGCGTCGTGT	39600
AGATCGGAAGAGCGTCGTGTA	49826
AGATCGGAAGAGCGTCGTGTAG	122420
AGATCGGAAGAGCGTCGTGTAGG	106492
AGATCGGAAGAGCGTCGTGTAGGG	45656
AGATCGGAAGAGCGTCGTGTAGGGA	66774
AGATCGGAAGAGCGTCGTGTAGGGAAA	81492
AGATCGGAAGAGCGTCGTGTAGGGAAAGA	43652
AGATCGGAAGAGCGTCGTGTAGGGAAAGAG	72304
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	44822
other adapter sequences	1916420

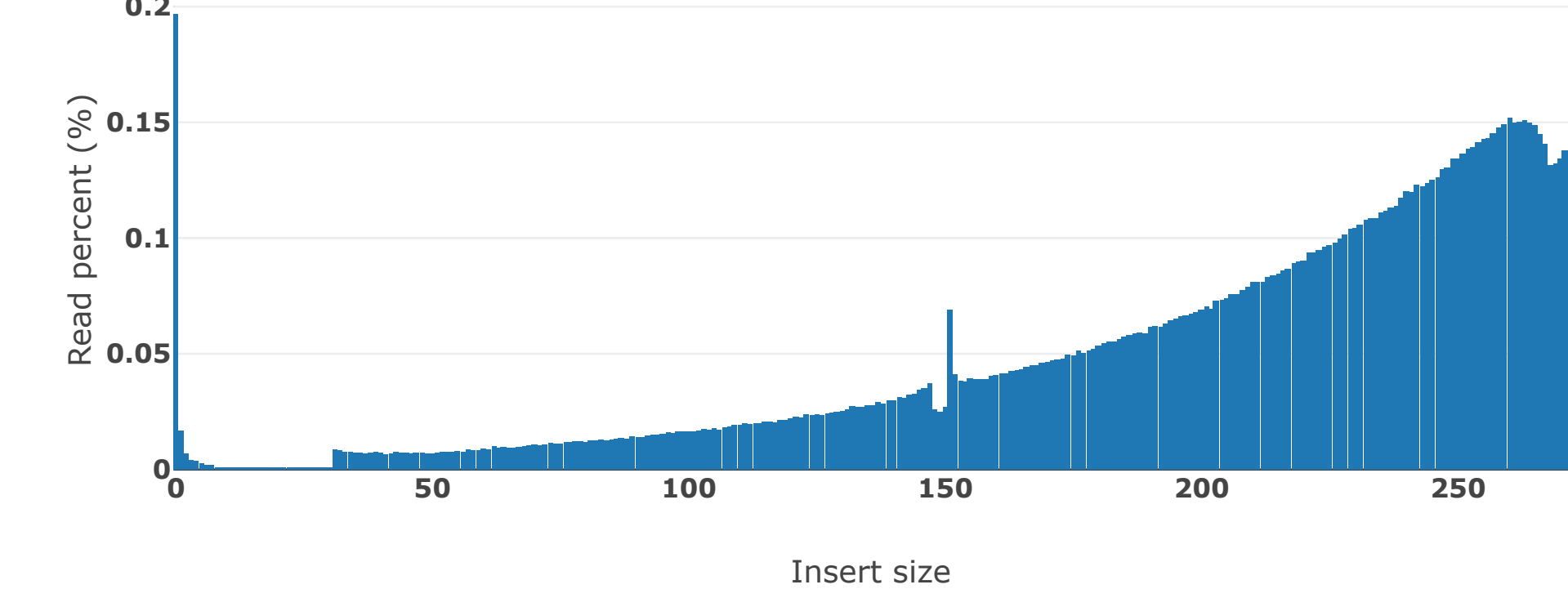
Duplication

duplication rate (74.374236%)



Insert size estimation

Insert size distribution (87.250883% reads are with unknown length)

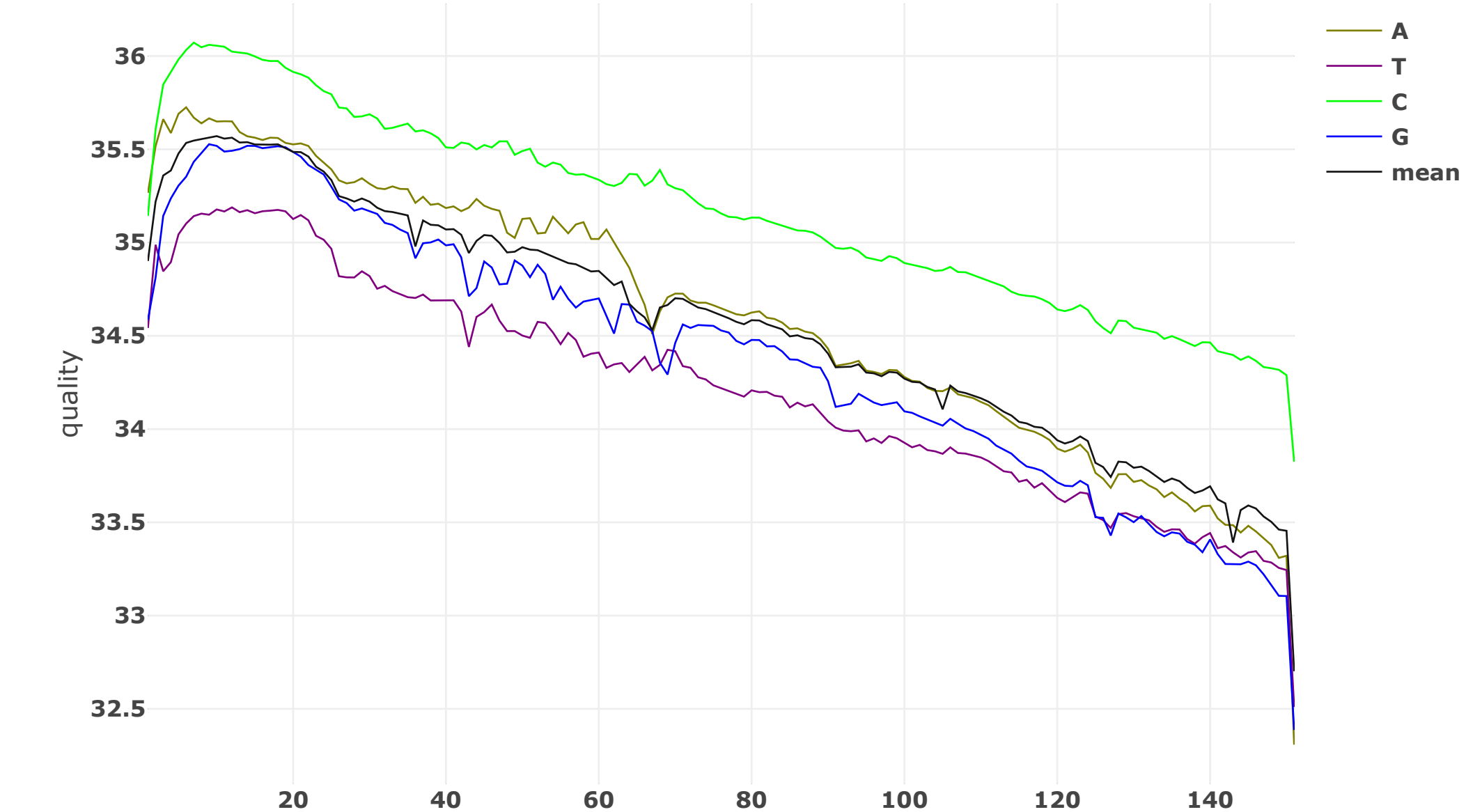


This estimation is based on paired-end overlap analysis, and there are 87.250883% reads found not overlapped. The nonoverlapped read pairs may have insert size <30 or >272, or contain too much sequencing errors to be detected as overlapped.

Before filtering

Before filtering: read1: quality

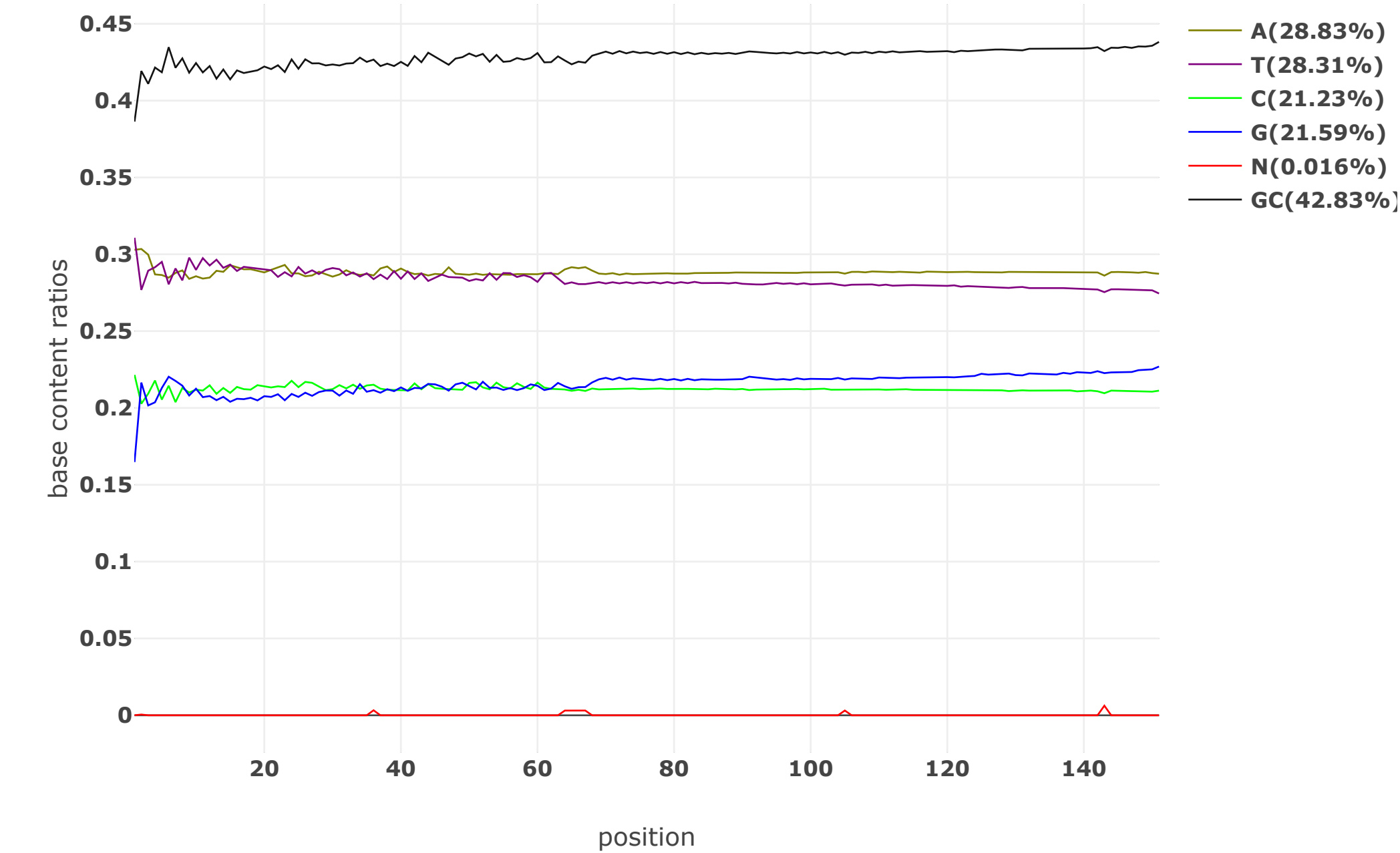
Value of each position will be shown on mouse over.



position

Before filtering: read1: base contents

Value of each position will be shown on mouse over.



Before filtering: read1: KMER counting

Darker background means larger counts. The count will be shown on mouse over.

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACCT	AACCTC	AACCTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTT	ATTTG	ATTCA	ATTCT	ATTCC	ATTCTG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCTT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTT	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTTGG
TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
TCA	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCAGG
TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG

TG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTT	TGTTG	TGTCA	TGTCT	TGTCC	TGTCC	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCCA	TGCGT	TGCCG	TGCCG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTCGA	CTCGT	CTCGC	CTCGG
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCC	CCCCG	CCCCA	CCCGT	CCCCC	CCCCG
CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGA	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT	CGACC	CGACG	CGAGA	CGAGT	CGAGC	CGAGG
CGT	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC	CGTTG	CGTCA	CGTCT	CGTCC	CGTCG	CGTGA	CGTGT	CGTGC	CGTGG
CGC	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGCGG
CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GA AAA	GA AAT	GA AAC	GA AAG	GA ATA	GA ATT	GA ATC	GA ATG	GA ACA	GA ACT	GA ACC	GA ACG	GA AGA	GA AGT	GA AGC	GA AGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GA CTA	GA CTT	GA CTC	GA CTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GT AAT	GT AAC	GT AAG	GT ATA	GT ATT	GT ATC	GT ATG	GT ACA	GT ACT	GT ACC	GT ACG	GT AGA	GT AGT	GT AGC	GT AGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCC	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCTT	GTCCC	GTCCG	GTCTGA	GTCTGT	GTCTGC	GTCTGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCC	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGA AA	GGA AT	GGA AC	GGA AG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
GGT	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGTGG
GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
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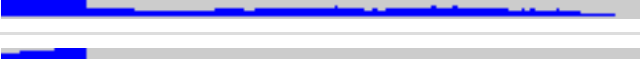


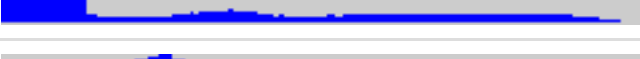









Before filtering: read1: overrepresented sequences

Sampling rate: 1 / 20

[illegible]

[illegible]

[illegible]

		
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	24 (0.000056%)	
TGAGATGTGTATAAGAGACA	142130 (0.166086%)	
TGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23231 (0.054293%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	29391 (0.068689%)	
TGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	64 (0.000150%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGACA	48 (0.000112%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	258 (0.000603%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCC	102 (0.000238%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	82 (0.000192%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	85 (0.000199%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGAG	104 (0.000243%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCC	73 (0.000171%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCT	93 (0.000217%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	85 (0.000199%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	91 (0.000213%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	91 (0.000213%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	93 (0.000217%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	265 (0.000619%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	87 (0.000203%)	
TGTCTCTTATACACATCTCA	900 (0.001052%)	
TGTCTCTTATACACATCTGA	605 (0.000707%)	
TGTCTCTTATACACATCTGG	709 (0.000828%)	
TGTCTCTTATACACATCTTG	694 (0.000811%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	11941 (0.027907%)	
TGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGT	78 (0.000182%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	4653 (0.010874%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	2220 (0.005188%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	24584 (0.057455%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGAG	1564 (0.003655%)	
TG	9022 (0.021085%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTT	305 (0.000713%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	51 (0.000119%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	51 (0.000119%)	

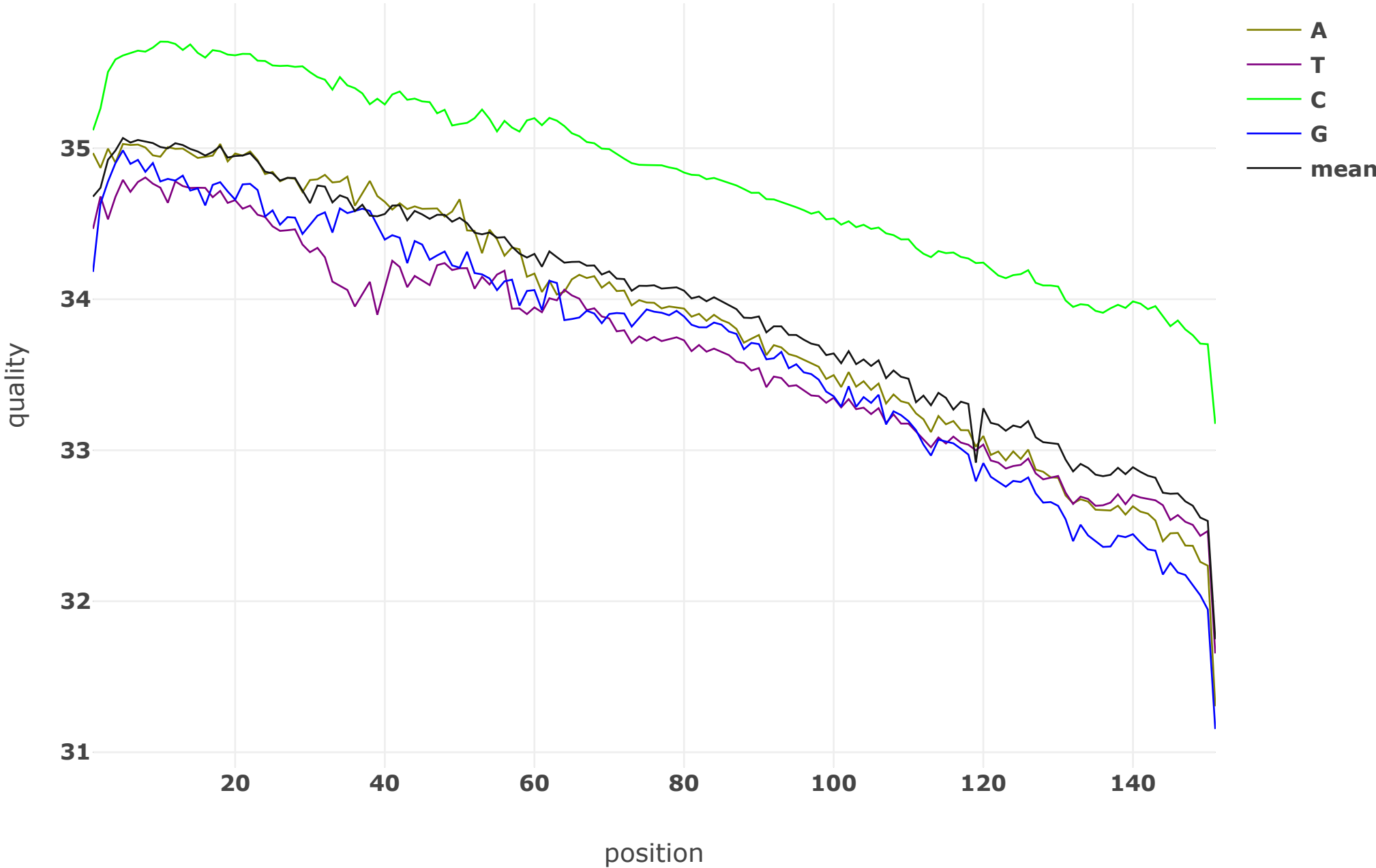
TTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT

16656 (0.038927%)



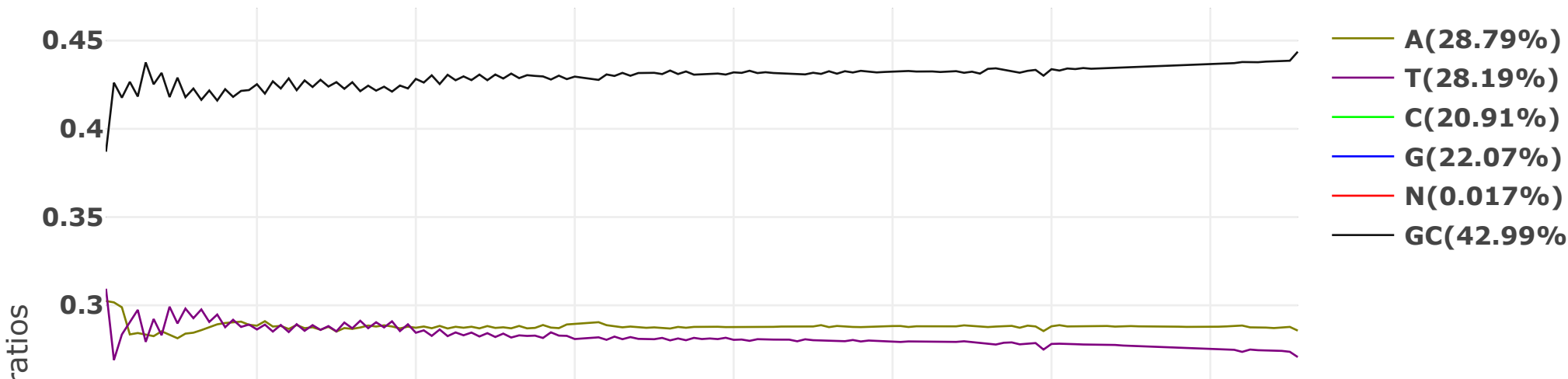
Before filtering: read2: quality

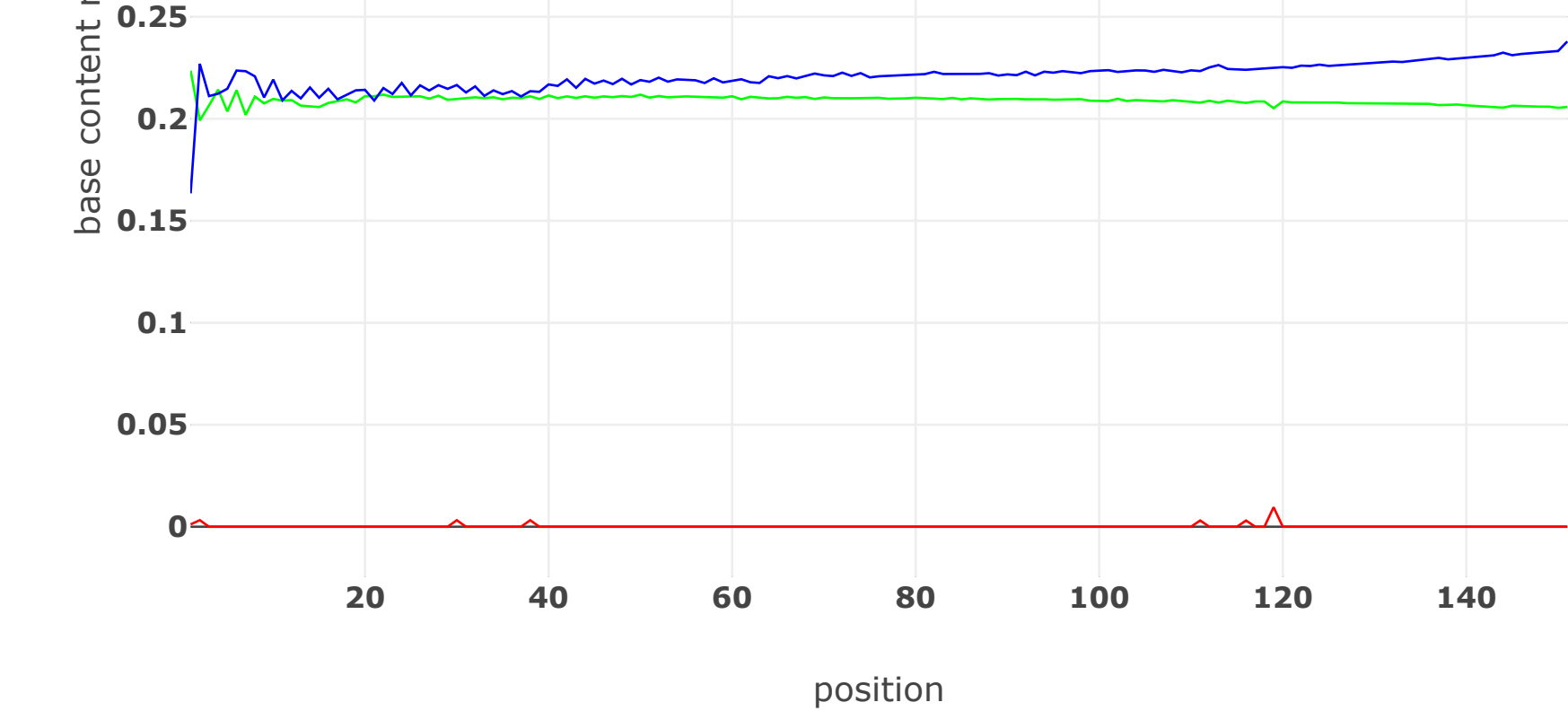
Value of each position will be shown on mouse over.



Before filtering: read2: base contents

Value of each position will be shown on mouse over.




































Before filtering: read2: KMER counting



































Darker background means larger counts. The count will be shown on mouse over.

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAGG
AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACCT	AACTC	AACGT	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTT	ATTTG	ATTCA	ATTCT	ATTCC	ATTCT	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCTT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
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TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
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Before filtering: read2: overrepresented sequences

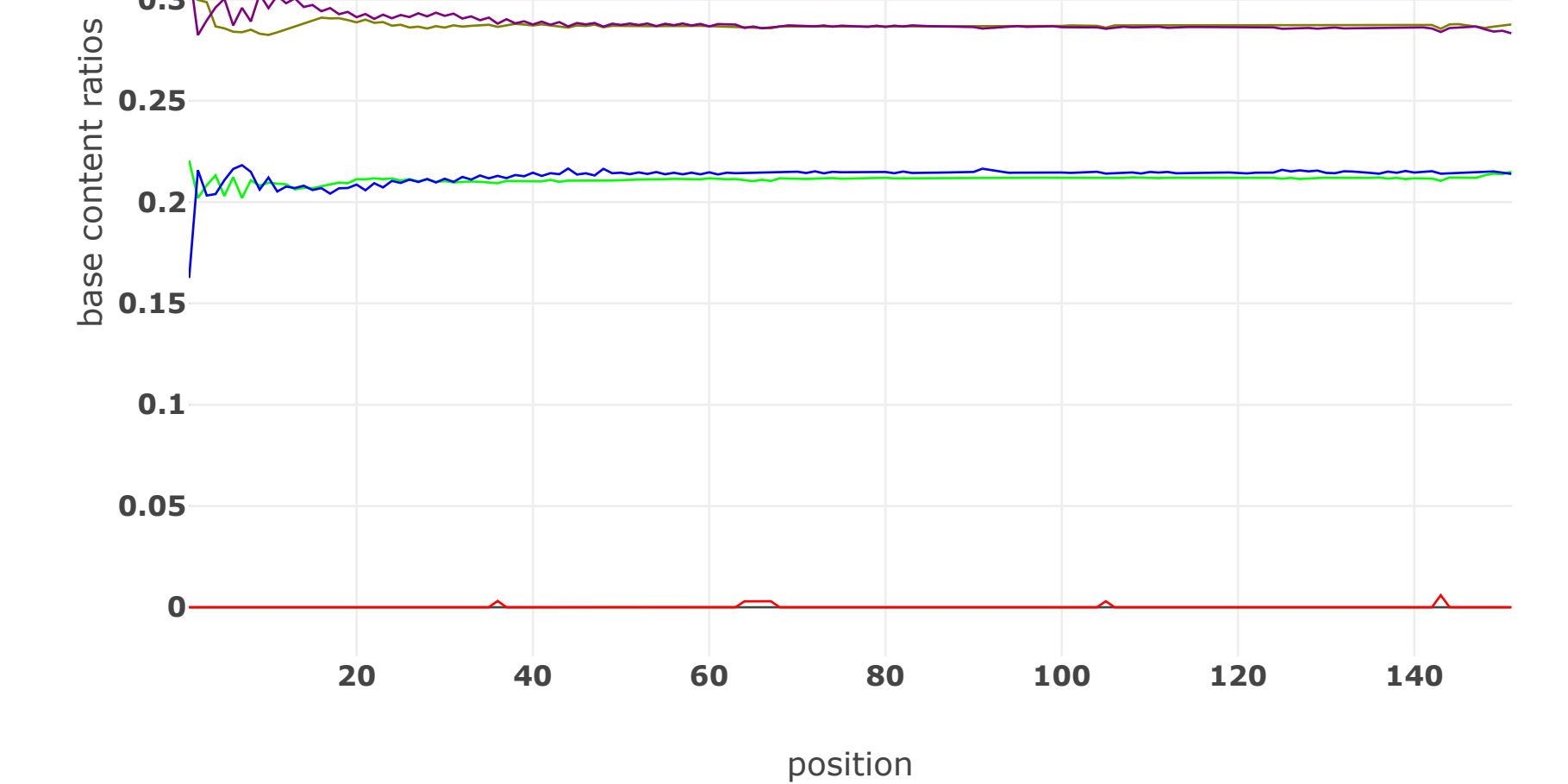
Sampling rate: 1 / 20

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6998 (0.016355%)	
AACCCTAACCCTAACCCTAACCCTAACCCTAACCCTAACC	154 (0.000360%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23768 (0.055548%)	
AAGATGTGTATAAGAGACAG	242845 (0.283776%)	
ACACACACACACACACACACACACACACACACACACACAA	2341 (0.005471%)	
AC	54905 (0.128318%)	
ACACACACACACACACACACACACACACACACACACACAG	1712 (0.004001%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	2882 (0.006736%)	
ACACATCTAGATGTGTATAAGAGACAGCACACACACACAC	182 (0.000425%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	16832 (0.039338%)	
ACATCTAGATGTGTATAAGAGACAGCACACACACACACAC	225 (0.000526%)	
ACCCTAACCCCTAACCCCTAACCCCTAACCCCTAACCCCTAACCC	220 (0.000514%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21464 (0.050163%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1402 (0.003277%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	26456 (0.061830%)	
AG	14183 (0.033147%)	
AGATCGGAAGAGCGTCGTGT	108057 (0.126270%)	
AGATGTGTATAAGAGACAGCACACACACACACACACACAC	18162 (0.042446%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	16426 (0.038389%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	37495 (0.087629%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22064 (0.051566%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	169 (0.000395%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	40213 (0.093982%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	135 (0.000316%)	
ATGT	17452 (0.040787%)	
CAAGATGTGTATAAGAGACA	126163 (0.147427%)	
CACACACACACACACACACACACACACACACACACACAAA	1526 (0.003566%)	
CA	35294 (0.082485%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	19397 (0.045333%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	5126 (0.011980%)	
CACATCTAGATGTGTATAAGAGACAGCACACACACACACA	185 (0.000432%)	

CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	16768 (0.039188%)	
CAGATGTGTATAAGAGACAG	232707 (0.271929%)	
CCAGATGTGTATAAGAGACA	130369 (0.152342%)	
CCCTAACCTAACCTAACCTAACCTAACCTAACCT	341 (0.000797%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	52671 (0.123097%)	
CCTAACCTAACCTAACCTAACCTAACCTAACCTAACCTA	333 (0.000778%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	617 (0.001442%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1335 (0.003120%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1798 (0.004202%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	319 (0.000746%)	
CTAACCTAACCTAACCTAACCTAACCTAACCTAACCTAA	187 (0.000437%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22633 (0.052895%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	9629 (0.022504%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	96 (0.000224%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	74 (0.000173%)	
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CTGTCTCTTATACACATCTC	315409 (0.368570%)	
CTGTCTCTTATACACATCTG	330654 (0.386385%)	
CTGTCTCTTATACACATCTT	332587 (0.388643%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	71 (0.000166%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21725 (0.050773%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	13380 (0.031270%)	
GAGATGTGTATAAGAGACAG	197777 (0.231112%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22080 (0.051603%)	
GATGTGTATAAGAGACAGCACACACACACACACACACA	178 (0.000416%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGT	193 (0.000451%)	

[illegible]

[illegible]



After filtering: read1: KMER counting

Darker background means larger counts. The count will be shown on mouse over.


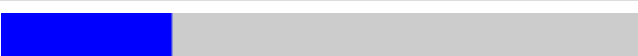


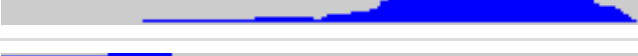
























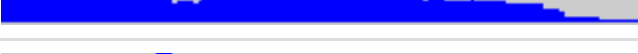




	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
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AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AAC TT	AAC TC	AAC TG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
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ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
ATT	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTT C	ATTT G	ATTCA	ATTCT	ATTCC	ATT CG	ATTGA	ATTGT	ATTGC	ATTGG
ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
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CGG	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGGGG
GAA	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GAAGG
GAT	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GATGG
GAC	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GACGG
GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
GTA	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GTAGG
GTT	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTT CG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCTT	GTCCC	GTCCG	GTCCGA	GTCGT	GTCCG	GTCGG
GTG	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT	GTGTC	GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTGGG
GCA	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GCAGG
GCT	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC	GCTTG	GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCTGG
GCC	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCCGG
GCG	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCGGG
GGA	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGAGG
















Sampling rate: 1 / 20

CACACACACACACACACACACACACACACACACACAC	288 (0.000859%)
---------------------------------------	-----------------

CACACACACACACACACACACACACACACACACACAGA	671 (0.002002%)	
CACACACACACACACACACCTGTCTCTTATACACATCT	13691 (0.040858%)	
CACACACACCTGTCTCTTATACACATCTAGATGTGTATAA	11447 (0.034161%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	2196 (0.006553%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	5090 (0.015190%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17495 (0.052210%)	
CACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	14014 (0.041822%)	
CAGATGTGTATAAGAGACAG	195092 (0.291105%)	
CAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	12416 (0.037053%)	
CCAGATGTGTATAAGAGACA	108078 (0.161268%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	52945 (0.158003%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	640 (0.001910%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1371 (0.004091%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	2064 (0.006160%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	351 (0.001047%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22395 (0.066833%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	3399 (0.010144%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	18294 (0.054595%)	
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CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAG	715 (0.002134%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	1672 (0.004990%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	3926 (0.011716%)	
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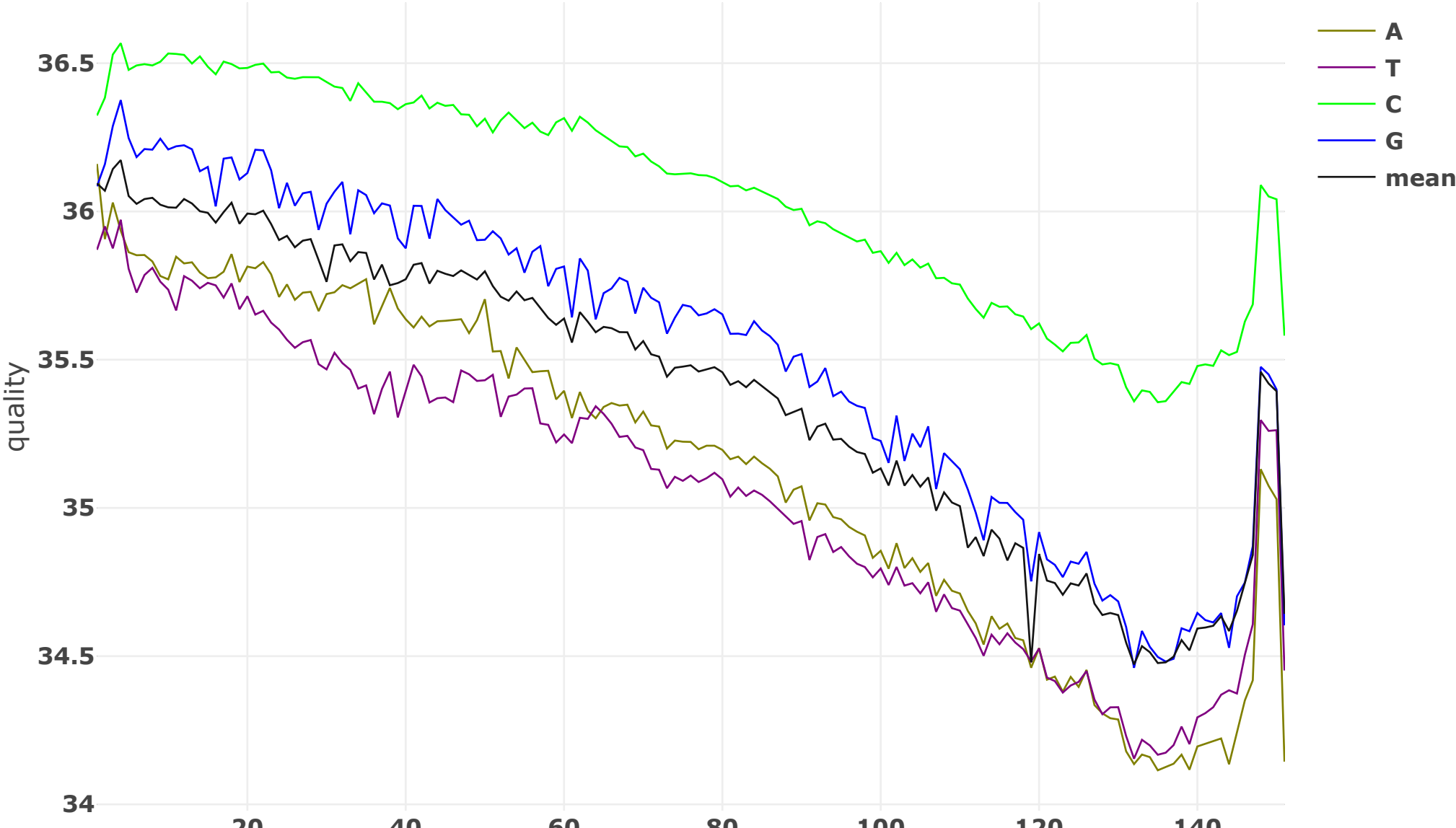
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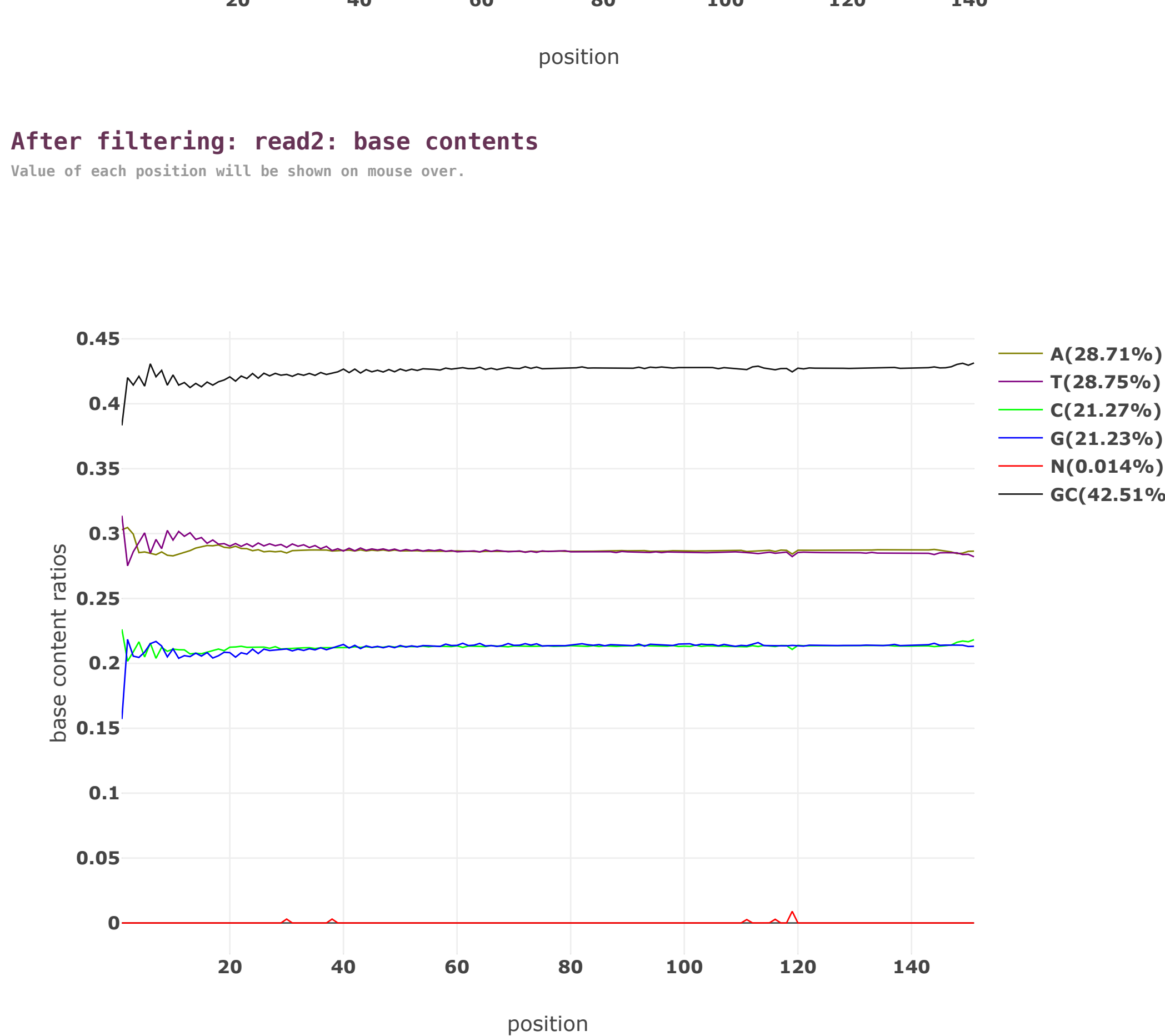
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TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	29633 (0.088433%)	
TAGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAA	33 (0.000098%)	
TATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGT	52 (0.000155%)	
TCACACACACACACACACACACACACACACACACACAC	12730 (0.037990%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	28231 (0.084249%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	4532 (0.013525%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	51 (0.000152%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	32 (0.000095%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2205 (0.006580%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	4856 (0.014492%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	7254 (0.021648%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	26 (0.000078%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	14 (0.000042%)	
TGAGATGTGTATAAGAGACA	120964 (0.180496%)	
TGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20590 (0.061446%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	25858 (0.077168%)	
TGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	27 (0.000081%)	
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TGTCTCTTATACACATCTCA	658 (0.000982%)	

		
TGTCTCTTATACACATCTGA	448 (0.000668%)	
TGTCTCTTATACACATCTGG	521 (0.000777%)	
TGTCTCTTATACACATCTTG	517 (0.000771%)	
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TG	4335 (0.012937%)	
TGTTT	131 (0.000391%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	34 (0.000101%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	31 (0.000093%)	
TTGT	10846 (0.032368%)	

After filtering: read2: quality

Value of each position will be shown on mouse over.





After filtering: read2: KMER counting

Darker background means larger counts. The count will be shown on mouse over.




























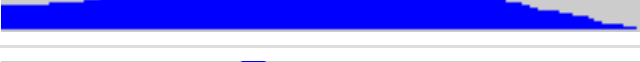






	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
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AAT	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATGG
AAC	AACAA	AACAT	AACAC	AACAG	AACTA	AACCT	AACCTC	AACCTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACGG
AAG	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGGG
ATA	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATAGG
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ATC	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATCGG
ATG	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATGGG
ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACT	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACTGG
ACC	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACCGG
ACG	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACGGG
AGA	AGAAA	AGAAT	AGAAC	AGAAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGAGG
AGT	AGTAA	AGTAT	AGTAC	AGTAG	AGTTA	AGTTT	AGTTC	AGTTG	AGTCA	AGTCT	AGTCC	AGTCG	AGTGA	AGTGT	AGTGC	AGTGG
AGC	AGCAA	AGCAT	AGCAC	AGCAG	AGCTA	AGCTT	AGCTC	AGCTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGCGG
AGG	AGGAA	AGGAT	AGGAC	AGGAG	AGGTA	AGGTT	AGGTC	AGGTG	AGGCA	AGGCT	AGGCC	AGGCG	AGGGA	AGGGT	AGGGC	AGGGG
TAA	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAAGG
TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
TAC	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TACGG
TAG	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAGGG
TTA	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACG	TTAGA	TTAGT	TTAGC	TTAGG
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TTC	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	TTCTC	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	TTCGG
TTG	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTGGG
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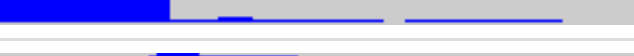




























T	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG
TCG	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCGGG
TGA	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGAGG
TGT	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTT	TGTTG	TGTCA	TGTCT	TGTCC	TGTCT	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAA	CAAA	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAAGG
CAT	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CATGG
CAC	CACAA	CACAT	CACAC	CACAG	CAC	CAC	CAC	CAC	CAC	CAC	CAC	CAC	CAC	CAC	CAC	CAC
CAG	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAGGG
CTA	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTAGG
CTT	CTTAA	CTTAT	CTTAC	CTTAG	CTTTA	CTTTT	CTTTC	CTTTG	CTTCA	CTTCT	CTTCC	CTTCG	CTTGA	CTTGT	CTTGC	CTTGG
CTC	CTCAA	CTCAT	CTCAC	CTCAG	CTCTA	CTCTT	CTCTC	CTCTG	CTCCA	CTCCT	CTCCC	CTCCG	CTC	CTC	CTC	CTC
CTG	CTGAA	CTGAT	CTGAC	CTGAG	CTGTA	CTGTT	CTGTC	CTGTG	CTGCA	CTGCT	CTGCC	CTGCG	CTGGA	CTGGT	CTGGC	CTGGG
CCA	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCAGG
CCT	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
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CCG	CCGAA	CCGAT	CCGAC	CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
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GAG	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC	GAGTG	GAGCA	GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAGGG
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GGC	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGCGG
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG







After filtering: read2: overrepresented sequences

Sampling rate: 1 / 20

[illegible]

AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTG	11500 (0.034385%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	33423 (0.099934%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19502 (0.058310%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	109 (0.000326%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	36215 (0.108282%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	64 (0.000191%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	10785 (0.032247%)	
CAAGATGTGTATAAGAGACA	108761 (0.162596%)	
CACACACACACACACACACACACACACACACACACAAA	745 (0.002228%)	
CACACACACACACACACACACACACACACACACACACA	22260 (0.066557%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	16938 (0.050644%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	4369 (0.013063%)	
CACATCTAGATGTGTATAAGAGACAGCACACACACACACA	168 (0.000502%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	14978 (0.044784%)	
CAGATGTGTATAAGAGACAG	204062 (0.305070%)	
CCAGATGTGTATAAGAGACA	114014 (0.170449%)	
CCCTAACCCCTAACCCCTAACCCCTAACCCCTAACCCCT	148 (0.000443%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	46658 (0.139506%)	
CCTAACCCCTAACCCCTAACCCCTAACCCCTAACCCCTA	179 (0.000535%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	540 (0.001615%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1078 (0.003223%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1534 (0.004587%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	263 (0.000786%)	
CTAACCCCTAACCCCTAACCCCTAACCCCTAACCCCTAA	75 (0.000224%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19694 (0.058884%)	
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT	5678 (0.016977%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	70 (0.000209%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	41 (0.000123%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	3891 (0.011634%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	4611 (0.013787%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	7322 (0.021893%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	4113 (0.012298%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	4273 (0.012776%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	258 (0.000771%)	

		
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	20765 (0.062087%)	
TAACCCTAACCCCTAACCCCTAACCCCTAACCCCTAAC	38 (0.000114%)	
TACACATCTAGATGTGTATAAGAGACAGCACACACACA	129 (0.000386%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25099 (0.075045%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	73 (0.000218%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	38705 (0.115727%)	
TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC	7626 (0.022802%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	48 (0.000144%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	32 (0.000096%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	8840 (0.026431%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	13325 (0.039841%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACACAC	31 (0.000093%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	15 (0.000045%)	
TGAGATGTGTATAAGAGACA	124054 (0.185459%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	41869 (0.125187%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	223 (0.000667%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	85 (0.000254%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	84 (0.000251%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCT	98 (0.000293%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	72 (0.000215%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	74 (0.000221%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	79 (0.000236%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	78 (0.000233%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	202 (0.000604%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	100 (0.000299%)	
TGTCTCTTATACACATCTCA	802 (0.001199%)	
TGTCTCTTATACACATCTGG	707 (0.001057%)	
TGTCTCTTATACACATCTTG	660 (0.000987%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	8746 (0.026150%)	
TGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGT	31 (0.000093%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3122 (0.009335%)	
TGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAG	1421 (0.004249%)	
TGTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATA	2718 (0.008127%)	

		
TGTGTGTGTGTGCTGTCTTTATACACATCTAGATGTGTA	1673 (0.005002%)	
TGTGTGTGTGTGTGCTGTCTTTATACACATCTAGATGTG	2062 (0.006165%)	
TGTGTGTGTGTGTGCTGTCTTTATACACATCTAGATG	3906 (0.011679%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	21360 (0.063866%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACACAC	46 (0.000138%)	

```
fastp -i 5-7kb_S16_L002_R1_001.fastq.gz -I 5-7kb_S16_L002_R2_001.fastq.gz -o MP5k_F.trimmed.fq.gz -O MP5k_R.trimmed.fq.gz -n 5 -
q 30 -u 30 --length_required=100 --low_complexity_filter --complexity_threshold=20 --cut_by_quality3 --cut_by_quality5 --
cut_window_size=4 --cut_mean_quality=30 --trim_poly_g --poly_g_min_len=10 --overrepresentation_analysis --json=MP5k.json --
html=MP5k.html --report_title=MP5k --thread=8
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fastp 0.19.4, at 2018-10-07 00:07:18