# MP5k

# Summary

#### General

fastp version:	0.19.4 ( <a href="https://github.com/OpenGene/fastp">https://github.com/OpenGene/fastp</a> )
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 ( $\sim 0.375866\%$ ), 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
AGATCGGAAGACACGTCTGAA	38478
AGATCGGAAGACCACGTCTGAAC	36665
AGATCGGAAGACCACGTCTGAACT	36063
AGATCGGAAGACCACGTCTGAACTC	38698
AGATCGGAAGACCACGTCTGAACTCCAGTCAC	34961
AGATCGGAAGACCACGTCTGAACTCCAGTCACGC	37527
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAAT	36683
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTT	87332
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAA	99174
other adapter sequences	1946575

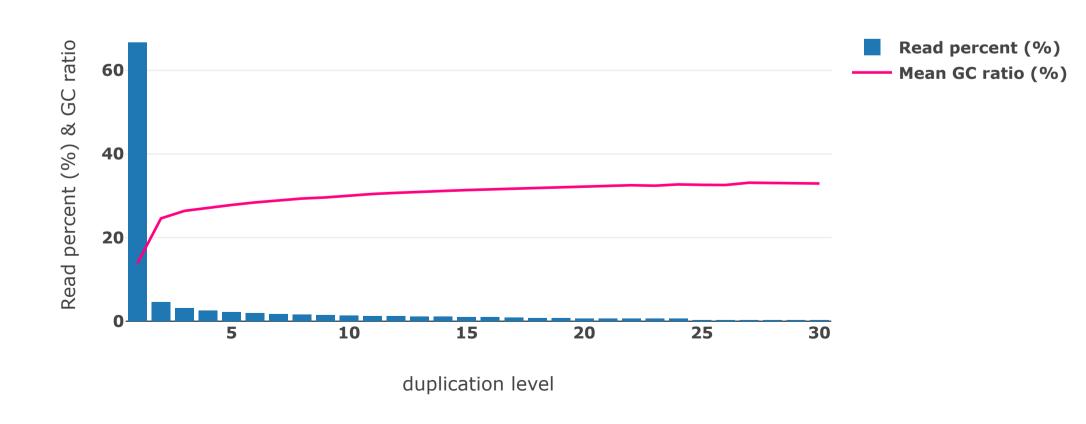
# Adapter or bad ligation of read2 The input has little adapter percentage (~0.324043%), probably it's trimmed before.

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

AGATCGGAAGA         52389           AGATCGGAAGAG         48470           AGATCGGAAGAGC         47525           AGATCGGAAGAGCG         53741           AGATCGGAAGAGCGT         41847           AGATCGGAAGAGCGTC         55526           AGATCGGAAGAGCGTCG         49605           AGATCGGAAGAGCGTCGT         44108           AGATCGGAAGAGCGTCGTG         44463           AGATCGGAAGAGCGTCGTG         39600           AGATCGGAAGAGCGTCGTGTA         49826           AGATCGGAAGAGCGTCGTGTAG         122420           AGATCGGAAGACGCTCGTGTAGG         45656           AGATCGGAAGACGCTCGTGTAGGGAA         45656           AGATCGGAAGACGCTCCTGTAGGGAA         81492           AGATCGGAAGACGCTCCTGTAGGGAAAGA         43652           AGATCGGAAGAGCGTCGTGTAGGGAAAGA         43652           AGATCGGAAGAGCGTCGTGTAGGGAAAGAG         72304           AGATCGGAAGAGCGTCGTGTAGGGAAAGAGGT         44822           Other adapter sequences         1916420	AGATCGGAAG	47070
AGATCGGAAGAGC       47525         AGATCGGAAGAGCG       53741         AGATCGGAAGAGCGT       41847         AGATCGGAAGAGCGTC       55526         AGATCGGAAGAGCGTCG       49605         AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGAA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGA	52389
AGATCGGAAGAGCG       53741         AGATCGGAAGAGCGTC       41847         AGATCGGAAGAGCGTC       55526         AGATCGGAAGAGCGTCG       49605         AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGACCGTCGTGTA       49826         AGATCGGAAGACCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGGG       45656         AGATCGGAAGAGCCGTCGTGAGGGAA       66774         AGATCGGAAGAGCCGTCGTGAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGACCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGAG	48470
AGATCGGAAGAGCGT       41847         AGATCGGAAGAGCGTC       55526         AGATCGGAAGAGCGTCG       49605         AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGAA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAAGAG       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAAGAG       44822	AGATCGGAAGAGC	47525
AGATCGGAAGAGCGTC       55526         AGATCGGAAGAGCGTCG       49605         AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGAA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGA       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGGT       44822	AGATCGGAAGAGCG	53741
AGATCGGAAGAGCGTCG       49605         AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTGAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGAGCGT	41847
AGATCGGAAGAGCGTCGT       44108         AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGAGCGTC	55526
AGATCGGAAGAGCGTCGTG       44463         AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGAGCGTCG	49605
AGATCGGAAGAGCGTCGTGT       39600         AGATCGGAAGAGCGTCGTGTA       49826         AGATCGGAAGAGCGTCGTGTAG       122420         AGATCGGAAGAGCGTCGTGTAGG       106492         AGATCGGAAGAGCGTCGTGTAGGG       45656         AGATCGGAAGAGCGTCGTGTAGGGA       66774         AGATCGGAAGAGCGTCGTGTAGGGAAA       81492         AGATCGGAAGAGCGTCGTGTAGGGAAAGA       43652         AGATCGGAAGAGCGTCGTGTAGGGAAAGAG       72304         AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT       44822	AGATCGGAAGAGCGTCGT	44108
AGATCGGAAGAGCGTCGTGTAG AGATCGGAAGAGCGTCGTGTAGG 122420 AGATCGGAAGAGCGTCGTGTAGG 106492 AGATCGGAAGAGCGTCGTGTAGGG 45656 AGATCGGAAGAGCGTCGTGTAGGGA AGATCGGAAGAGCGTCGTGTAGGGA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAAA AGATCGGAAGAGCGTCGTGTAGGGAAAAAA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGAA AGATCGGAAGAGCGTCGTGTAGGGAAAGAA AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT A4822	AGATCGGAAGAGCGTCGTG	44463
AGATCGGAAGAGCGTCGTGTAGG AGATCGGAAGAGCGTCGTGTAGG AGATCGGAAGAGCGTCGTGTAGGG AGATCGGAAGAGCGTCGTGTAGGG AGATCGGAAGAGCGTCGTGTAGGG AGATCGGAAGAGCGTCGTGTAGGGA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	AGATCGGAAGAGCGTCGTGT	39600
AGATCGGAAGAGCGTCGTGTAGG  AGATCGGAAGAGCGTCGTGTAGGG  AGATCGGAAGAGCGTCGTGTAGGGA  AGATCGGAAGAGCGTCGTGTAGGGA  AGATCGGAAGAGCGTCGTGTAGGGAAA  AGATCGGAAGAGCGTCGTGTAGGGAAAA  AGATCGGAAGAGCGTCGTGTAGGGAAAGA  AGATCGGAAGAGCGTCGTGTAGGGAAAGA  AGATCGGAAGAGCGTCGTGTAGGGAAAGA  AGATCGGAAGAGCGTCGTGTAGGGAAAGAG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGG  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGGT  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGGT	AGATCGGAAGAGCGTCGTGTA	49826
AGATCGGAAGAGCGTCGTGTAGGG AGATCGGAAGAGCGTCGTGTAGGGA AGATCGGAAGAGCGTCGTGTAGGGAA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	AGATCGGAAGAGCGTCGTGTAG	122420
AGATCGGAAGAGCGTCGTGTAGGGA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAA AGATCGGAAGAGCGTCGTGTAGGGAAAGA AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT 44822	AGATCGGAAGAGCGTCGTGTAGG	106492
AGATCGGAAGAGCGTCGTGTAGGGAAAGA 81492 AGATCGGAAGAGCGTCGTGTAGGGAAAGA 43652 AGATCGGAAGAGCGTCGTGTAGGGAAAGAG 72304 AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT 44822	AGATCGGAAGAGCGTCGTGTAGGG	45656
AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAG AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT 43652 72304 44822	AGATCGGAAGAGCGTCGTGTAGGGA	66774
AGATCGGAAGAGCGTCGTGTAGGGAAAGAG  72304  AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT  44822	AGATCGGAAGAGCGTCGTGTAGGGAAA	81492
AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT 44822	AGATCGGAAGAGCGTCGTGTAGGGAAAGA	43652
	AGATCGGAAGAGCGTCGTGTAGGGAAAGAG	72304
other adapter sequences 1916420	AGATCGGAAGAGCGTCGTGTAGGGAAAGAGT	44822
	other adapter sequences	1916420

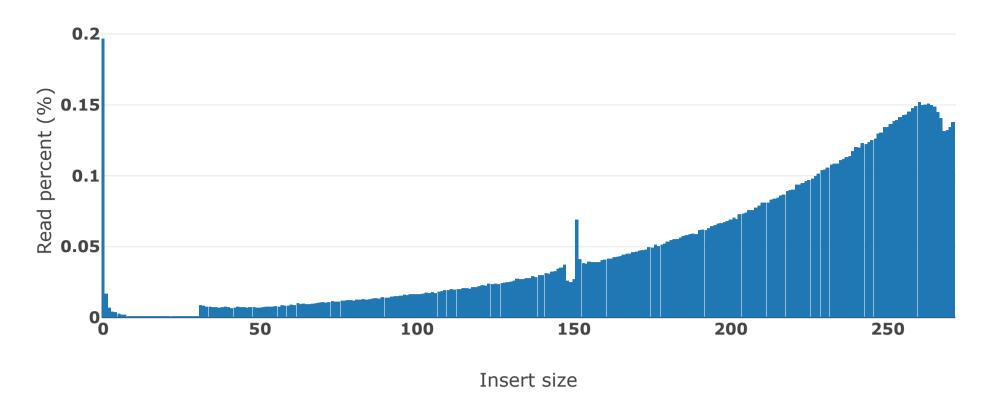
# Duplication

duplication rate (74.374236%)



# Insert size estimation

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

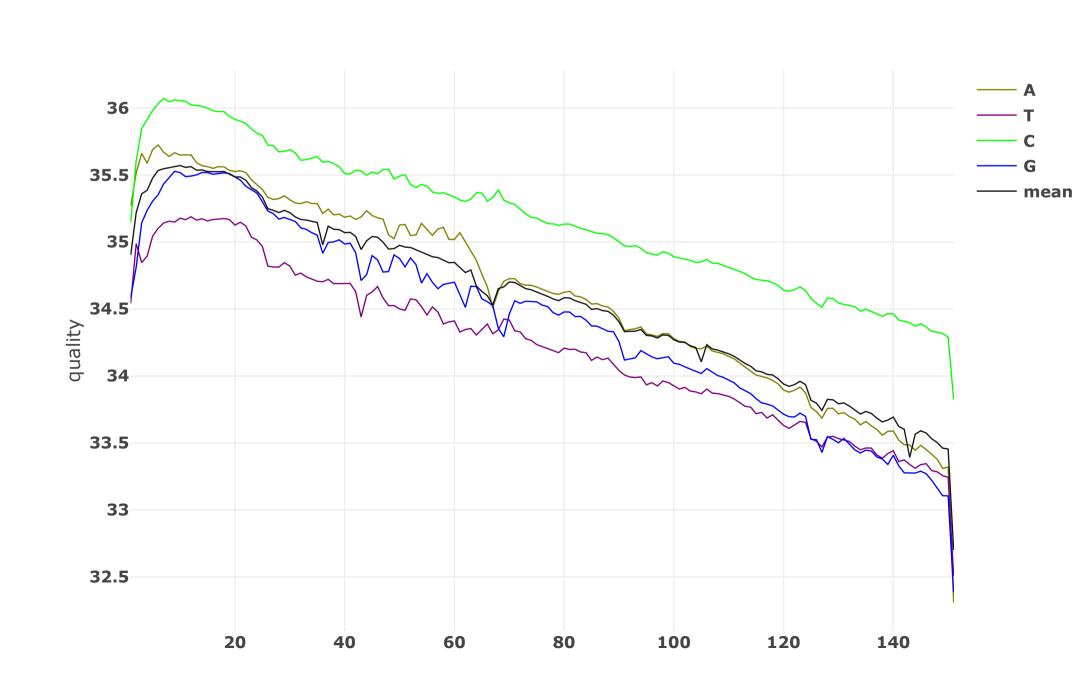


This estimation is based on paired—end overlap analysis, and there are 87.250883% reads found not overlapped.

The nonoverlapped read pairs may have insert size <30 or >272, or contain too much sequencing errors to be detected as overlapped.

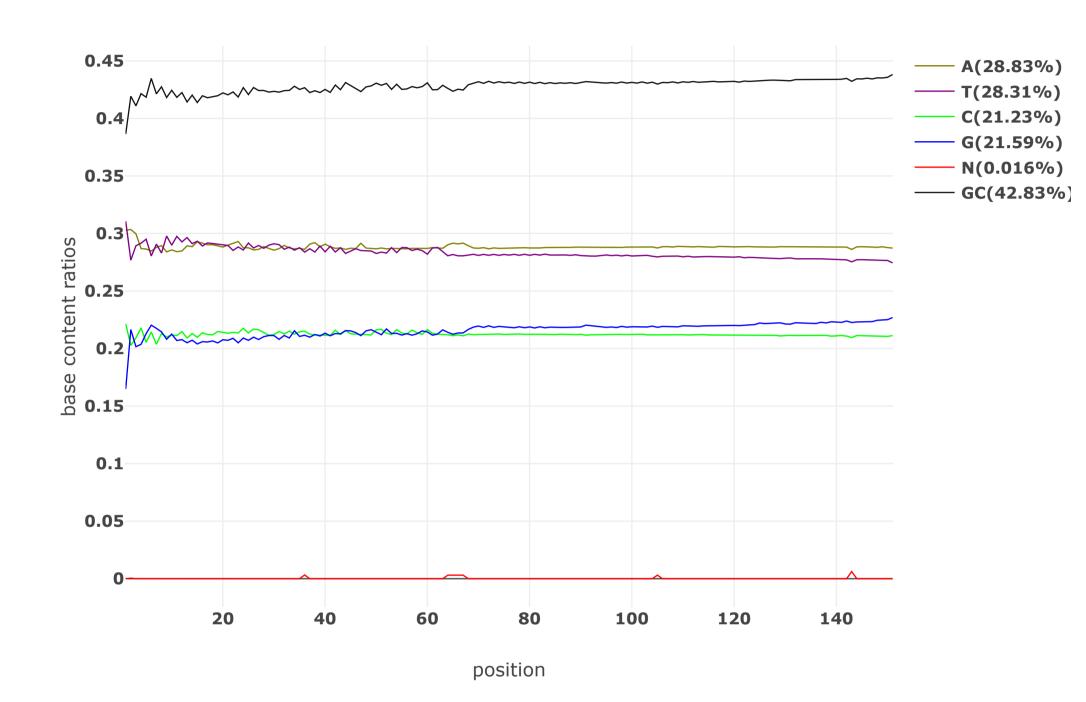
# Before filtering

## Before filtering: read1: quality



### Before filtering: read1: base contents

Value of each position will be shown on mouse over.



#### Before filtering: read1: KMER counting

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAA	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	AACTT	AACTC	AACTG	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	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	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	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
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	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

TCC	TCCAA	TCCAT	TCCAC	TCCAC	TCCTA	TOOTT	TCCTC	TCCTC	TCCCA	TCCCT	TCCCC	TCCCC	TCCCA	TOCOT	TCCCC	T6666
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	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	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	СТСТС	CTCTG	CTCCA	СТССТ	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	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
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	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	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	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
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
GGG	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGGGG

# Before filtering: read1: overrepresented sequences Sampling rate: 1 / 20

Sampling rate: 1 / 20		
overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AACACACACACACACACACACACACACACACACACACA	21376 (0.049958%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28377 (0.066320%)	
AAGATGTGTATAAGAGACAG	241994 (0.282781%)	
ACACACACACACACACACACACACACACACACACA	983 (0.002297%)	
ACACACACACACACACACACACACACACACACACACAC	21907 (0.051199%)	
AC	651 (0.001521%)	
AC	383 (0.000895%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAG	1651 (0.003859%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3413 (0.007976%)	
ACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTG	135 (0.000316%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	20557 (0.048044%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24986 (0.058395%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1808 (0.004225%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	13171 (0.030782%)	
AG	15406 (0.036005%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	413 (0.002413%)	
AGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAAAGGGGGGGG	4708 (0.040986%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTG	16458 (0.038464%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	26719 (0.062445%)	

AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	29387 (0.068680%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25505 (0.059608%)	
ATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	148 (0.000346%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	18596 (0.043461%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCGCGTATGCCGTCTTCTGCTTGAAAAGGGGG GGGGGGGGGG	13 (0.000113%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAAGGGGGGGG	50 (0.000435%)	
ATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAATGGGGGGGG	25 (0.000218%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	48415 (0.113150%)	
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25870 (0.060461%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	138 (0.000323%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	20007 (0.046758%)	
CAAGATGTGTATAAGAGACA	127182 (0.148618%)	
CACACACACACACACACACACACACACACACAAA	1813 (0.004237%)	
CACACACACACACACACACACACACACACACACACACA	19935 (0.046590%)	
CACACACACACACACACACACACACACACACACAC	532 (0.001243%)	
CACACACACACACACACACACACACACACACACACAGA	1188 (0.002776%)	
CACACACACACACACACCTGTCTCTTATACACATCT	16825 (0.039322%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAA	14100 (0.032953%)	
CACACACCTGTCTTATACACATCTAGATGTGTATAAGA	2587 (0.006046%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	6106 (0.014270%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20075 (0.046917%)	
CACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	16073 (0.037564%)	
CAGATGTGTATAAGAGACAG	229749 (0.268472%)	
CAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	14102 (0.032958%)	
CCAGATGTGTATAAGAGACA	127860 (0.149410%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	60090 (0.140436%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	808 (0.001888%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1738 (0.004062%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	2391 (0.005588%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	404 (0.000944%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	26103 (0.061005%)	
стстстстстстстстстстстстстстст	7787 (0.018199%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	20801 (0.048614%)	

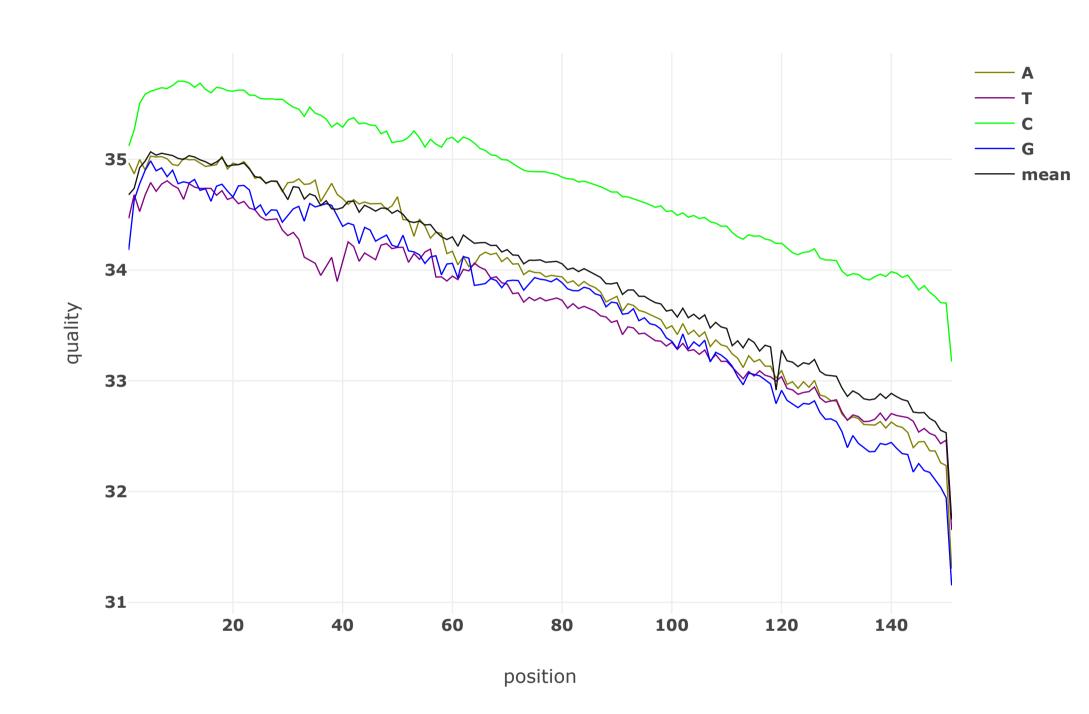
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	104 (0.000243%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	80 (0.000187%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	1573 (0.003676%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAG	746 (0.001743%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	1746 (0.004081%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	4792 (0.011199%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	2514 (0.005875%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	2779 (0.006495%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	378 (0.000883%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	383 (0.000895%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	445 (0.001040%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	775 (0.001811%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTA	777 (0.001816%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTC	1239 (0.002896%)	
CTGTCTCTTATACACATCTC	341346 (0.398879%)	
CTGTCTCTTATACACATCTG	366012 (0.427702%)	
CTGTCTCTTATACACATCTT	365226 (0.426784%)	
CTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	19812 (0.046302%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	82 (0.000192%)	
CTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGT	37 (0.000086%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25585 (0.059795%)	
GACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	22219 (0.051928%)	
GA	14804 (0.034598%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	417 (0.002436%)	
GAGATGTGTATAAGAGACAG	199049 (0.232598%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22669 (0.052980%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCGCGTATGCCGTCTTCTGCTTGAAAAGGGG GGGGGGGGGG	7060 (0.061462%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAAGGGG GGGGGGGGGG	17832 (0.155240%)	
GATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAATATCTCGTATGCCGTCTTCTGCTTGAAAATGGG GGGGGGGGGG	3617 (0.031488%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGT	209 (0.000488%)	
GCACACACACACACACACACACACACACACACACACACA	29522 (0.068996%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	29617 (0.069218%)	

GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2427 (0.005672%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5375 (0.012562%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	7705 (0.018007%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1224 (0.002861%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	41191 (0.096267%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	112595 (0.263145%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1892 (0.011054%)	
GGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	11255 (0.026304%)	
GTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	83 (0.000194%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	195 (0.000456%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	156 (0.000365%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	39727 (0.092846%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	15481 (0.036181%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	166 (0.000388%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2710 (0.006334%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	2182 (0.005100%)	
GTGTGTGTGTCTCTTATACACATCTAGATGTGTATAA	3256 (0.007610%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	1121 (0.002620%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	27971 (0.065371%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTTTT	713 (0.001666%)	
TACACACACACACACACACACACACACACACACA	21176 (0.049490%)	
TACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGT	141 (0.000330%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	33723 (0.078814%)	
TAGATCGGAAGAGCACACGTCTGAACTCCAGTCACGCCAA	17350 (0.040549%)	
TATACACATCTAGATGTGTATAAGAGACAGGTGTGTGT	89 (0.000208%)	
TCACACACACACACACACACACACACACACACAC	19954 (0.046634%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	31714 (0.074119%)	
тстстстстстстстстстстстстстстстс	10155 (0.023733%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	87 (0.000203%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	75 (0.000175%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2534 (0.005922%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	5687 (0.013291%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	8181 (0.019120%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	51 (0.000119%)	

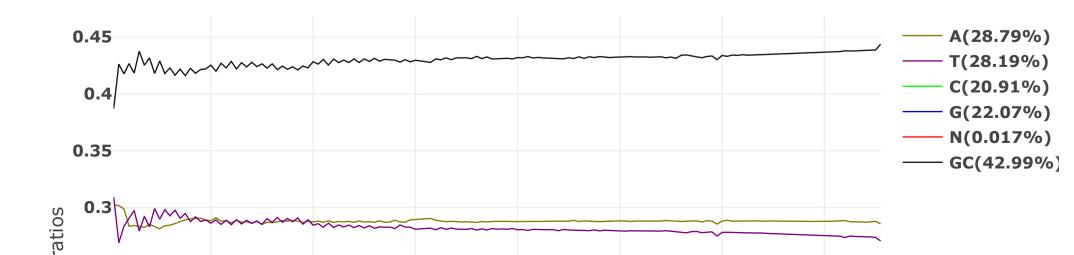
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	24 (0.000056%)	
TGAGATGTGTATAAGAGACA	142130 (0.166086%)	
TGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23231 (0.054293%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	29391 (0.068689%)	
TGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGT	64 (0.000150%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGACA	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%)	
TGTGTGTGTGCTCTCTTATACACATCTAGATGTGTATA	24584 (0.057455%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGAG	1564 (0.003655%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	9022 (0.021085%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTT	305 (0.000713%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACAC	51 (0.000119%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	51 (0.000119%)	

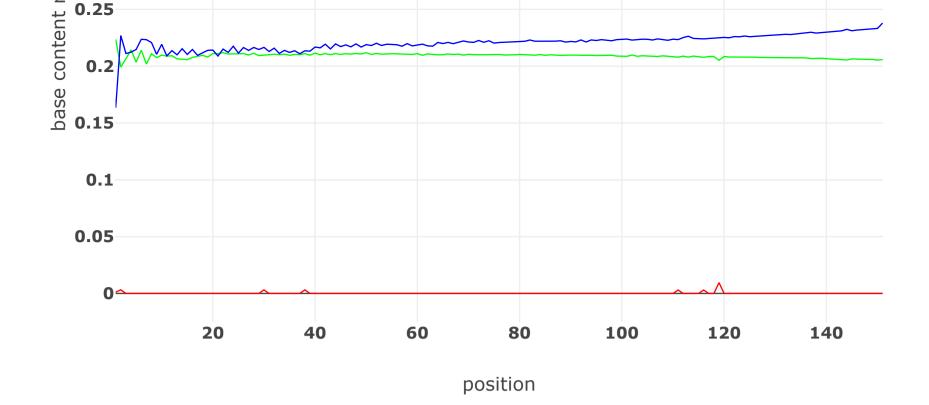
# Before filtering: read2: quality

Value of each position will be shown on mouse over.



# Before filtering: read2: base contents





# Before filtering: read2: KMER counting

	AA	AT	AC	AG	TA	TT	TC	TG	shown or CA	СТ	СС	CG	GA	GT	GC	GG
Α	AAAAA	AAAAT	AAAAC	AAAAG	AAATA	AAATT	AAATC	AAATG	AAACA	AAACT	AAACC	AAACG	AAAGA	AAAGT	AAAGC	AAAG
T	AATAA	AATAT	AATAC	AATAG	AATTA	AATTT	AATTC	AATTG	AATCA	AATCT	AATCC	AATCG	AATGA	AATGT	AATGC	AATG
Ī	AACAA	AACAT	AACAC	AACAG	AACTA	AACTT	AACTC	AACTG	AACCA	AACCT	AACCC	AACCG	AACGA	AACGT	AACGC	AACG
Ī	AAGAA	AAGAT	AAGAC	AAGAG	AAGTA	AAGTT	AAGTC	AAGTG	AAGCA	AAGCT	AAGCC	AAGCG	AAGGA	AAGGT	AAGGC	AAGG
	ATAAA	ATAAT	ATAAC	ATAAG	ATATA	ATATT	ATATC	ATATG	ATACA	ATACT	ATACC	ATACG	ATAGA	ATAGT	ATAGC	ATA
	ATTAA	ATTAT	ATTAC	ATTAG	ATTTA	ATTTT	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	ATTGA	ATTGT	ATTGC	ATT
Į	ATCAA	ATCAT	ATCAC	ATCAG	ATCTA	ATCTT	ATCTC	ATCTG	ATCCA	ATCCT	ATCCC	ATCCG	ATCGA	ATCGT	ATCGC	ATC
Į	ATGAA	ATGAT	ATGAC	ATGAG	ATGTA	ATGTT	ATGTC	ATGTG	ATGCA	ATGCT	ATGCC	ATGCG	ATGGA	ATGGT	ATGGC	ATG
Į	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACA
ł	ACTAA	ACTAT	ACTAC	ACTAG	ACTTA	ACTTT	ACTTC	ACTTG	ACTCA	ACTCT	ACTCC	ACTCG	ACTGA	ACTGT	ACTGC	ACT
ł	ACCAA	ACCAT	ACCAC	ACCAG	ACCTA	ACCTT	ACCTC	ACCTG	ACCCA	ACCCT	ACCCC	ACCCG	ACCGA	ACCGT	ACCGC	ACC
ł	ACGAA	ACGAT	ACGAC	ACGAG	ACGTA	ACGTT	ACGTC	ACGTG	ACGCA	ACGCT	ACGCC	ACGCG	ACGGA	ACGGT	ACGGC	ACG
ł	AGAAA	AGAAT	AGAAC	AGAAG AGTAG	AGATA	AGATT	AGATC	AGATG	AGACA	AGACT	AGACC	AGACG	AGAGA	AGAGT	AGAGC	AGA AGT
ł	AGTAA AGCAA	AGTAT AGCAT	AGTAC AGCAC	AGTAG	AGTTA AGCTA	AGTTT AGCTT	AGTTC AGCTC	AGTTG AGCTG	AGTCA AGCCA	AGTCT AGCCT	AGTCC AGCCC	AGTCG AGCCG	AGTGA AGCGA	AGTGT AGCGT	AGTGC AGCGC	AGC
	AGGAA	AGGAT	AGGAC	AGCAG	AGGTA	AGCTT	AGGTC	AGGTG	AGCCA	AGCCT	AGCCC	AGCCG	AGCGA	AGCGT	AGCGC	AGC
	TAAAA	TAAAT	TAAAC	TAAAG	TAATA	TAATT	TAATC	TAATG	TAACA	TAACT	TAACC	TAACG	TAAGA	TAAGT	TAAGC	TAA
i	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TAT
i	TACAA	TACAT	TACAC	TACAG	TACTA	TACTT	TACTC	TACTG	TACCA	TACCT	TACCC	TACCG	TACGA	TACGT	TACGC	TAC
i	TAGAA	TAGAT	TAGAC	TAGAG	TAGTA	TAGTT	TAGTC	TAGTG	TAGCA	TAGCT	TAGCC	TAGCG	TAGGA	TAGGT	TAGGC	TAG
i	TTAAA	TTAAT	TTAAC	TTAAG	TTATA	TTATT	TTATC	TTATG	TTACA	TTACT	TTACC	TTACC	TTAGA	TTAGT	TTAGC	TTA
	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	TTTTG	TTTCA	TTTCT	TTTCC	TTTCG	TTTGA	TTTGT	TTTGC	TTT
ĺ	TTCAA	TTCAT	TTCAC	TTCAG	TTCTA	TTCTT	ТТСТС	TTCTG	TTCCA	TTCCT	TTCCC	TTCCG	TTCGA	TTCGT	TTCGC	ТТС
ĺ	TTGAA	TTGAT	TTGAC	TTGAG	TTGTA	TTGTT	TTGTC	TTGTG	TTGCA	TTGCT	TTGCC	TTGCG	TTGGA	TTGGT	TTGGC	TTG
	TCAAA	TCAAT	TCAAC	TCAAG	TCATA	TCATT	TCATC	TCATG	TCACA	TCACT	TCACC	TCACG	TCAGA	TCAGT	TCAGC	TCA
	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	ТСТ
	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCC
	TCGAA	TCGAT	TCGAC	TCGAG	TCGTA	TCGTT	TCGTC	TCGTG	TCGCA	TCGCT	TCGCC	TCGCG	TCGGA	TCGGT	TCGGC	TCG
Į	TGAAA	TGAAT	TGAAC	TGAAG	TGATA	TGATT	TGATC	TGATG	TGACA	TGACT	TGACC	TGACG	TGAGA	TGAGT	TGAGC	TGA
Į	TGTAA	TGTAT	TGTAC	TGTAG	TGTTA	TGTTT	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGT
Į	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGC
Ų	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGG
Ų	CAAAA	CAAAT	CAAAC	CAAAG	CAATA	CAATT	CAATC	CAATG	CAACA	CAACT	CAACC	CAACG	CAAGA	CAAGT	CAAGC	CAA
Ų	CATAA	CATAT	CATAC	CATAG	CATTA	CATTT	CATTC	CATTG	CATCA	CATCT	CATCC	CATCG	CATGA	CATGT	CATGC	CAT
Ų	CACAA	CACAT	CACAC	CACAG	CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CAC
Į	CAGAA	CAGAT	CAGAC	CAGAG	CAGTA	CAGTT	CAGTC	CAGTG	CAGCA	CAGCT	CAGCC	CAGCG	CAGGA	CAGGT	CAGGC	CAG
ł	CTAAA	CTAAT	CTAAC	CTAAG	CTATA	CTATT	CTATC	CTATG	CTACA	CTACT	CTACC	CTACG	CTAGA	CTAGT	CTAGC	CTA
ł	CTTAA CTCAA	CTTAT CTCAT	CTCAC	CTTAG	CTCTA	CTCTT	CTTTC CTCTC	CTTTG	CTTCA	CTCCT	CTTCC CTCCC	CTTCG CTCCG	CTTGA	CTTGT CTCGT	CTTGC	CTC
ł	CTGAA	CTGAT	CTCAC CTGAC	CTCAG CTGAG	CTCTA CTGTA	CTCTT CTGTT	CTGTC	CTCTG CTGTG	CTCCA CTGCA	CTCCT CTGCT	CTGCC	CTGCG	CTCGA CTGGA	CTGGT	CTCGC CTGGC	CTC CTG
i	CCAAA	CCAAT	CCAAC	CCAAG	CCATA	CCATT	CCATC	CCATG	CCACA	CCACT	CCACC	CCACG	CCAGA	CCAGT	CCAGC	CCA
i	CCTAA	CCTAT	CCTAC	CCTAG	CCTTA	CCTTT	CCTTC	CCTTG	CCTCA	CCTCT	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCT
				CCCAG												
i		CCGAT	CCGAC	CCGAG		CCGTT	CCGTC		CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT		
i	CGAAA	CGAAT	CGAAC	CGAAG	CGATA	CGATT	CGATC	CGATG	CGACA	CGACT		CGACG	CGAGA	CGAGT	CGAGC	CGA
ĺ	CGTAA	CGTAT	CGTAC	CGTAG	CGTTA	CGTTT	CGTTC				CGTCC	CGTCG	CGTGA	CGTGT		CGT
j	CGCAA	CGCAT	CGCAC	CGCAG	CGCTA	CGCTT	CGCTC	CGCTG	CGCCA	CGCCT	CGCCC	CGCCG	CGCGA	CGCGT	CGCGC	CGC
ĵ	CGGAA	CGGAT	CGGAC	CGGAG	CGGTA	CGGTT	CGGTC	CGGTG	CGGCA	CGGCT	CGGCC	CGGCG	CGGGA	CGGGT	CGGGC	CGG
j	GAAAA	GAAAT	GAAAC	GAAAG	GAATA	GAATT	GAATC	GAATG	GAACA	GAACT	GAACC	GAACG	GAAGA	GAAGT	GAAGC	GA/
j	GATAA	GATAT	GATAC	GATAG	GATTA	GATTT	GATTC	GATTG	GATCA	GATCT	GATCC	GATCG	GATGA	GATGT	GATGC	GAT
	GACAA	GACAT	GACAC	GACAG	GACTA	GACTT	GACTC	GACTG	GACCA	GACCT	GACCC	GACCG	GACGA	GACGT	GACGC	GAC
Į	GAGAA	GAGAT	GAGAC	GAGAG	GAGTA	GAGTT	GAGTC			GAGCT	GAGCC	GAGCG	GAGGA	GAGGT	GAGGC	GAG
Į	GTAAA	GTAAT	GTAAC	GTAAG	GTATA	GTATT	GTATC	GTATG	GTACA	GTACT	GTACC	GTACG	GTAGA	GTAGT	GTAGC	GT/
Į	GTTAA	GTTAT	GTTAC	GTTAG	GTTTA	GTTTT	GTTTC	GTTTG	GTTCA	GTTCT	GTTCC	GTTCG	GTTGA	GTTGT	GTTGC	GTT
Į	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC			GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	GTO
Į	GTGAA	GTGAT	GTGAC	GTGAG	GTGTA	GTGTT		GTGTG	GTGCA	GTGCT	GTGCC	GTGCG	GTGGA	GTGGT	GTGGC	GTG
Ų	GCAAA	GCAAT	GCAAC	GCAAG	GCATA	GCATT	GCATC	GCATG	GCACA	GCACT	GCACC	GCACG	GCAGA	GCAGT	GCAGC	GC/
Ų	GCTAA	GCTAT	GCTAC	GCTAG	GCTTA	GCTTT	GCTTC		GCTCA	GCTCT	GCTCC	GCTCG	GCTGA	GCTGT	GCTGC	GCT
4	GCCAA	GCCAT	GCCAC	GCCAG	GCCTA	GCCTT	GCCTC	GCCTG	GCCCA	GCCCT	GCCCC	GCCCG	GCCGA	GCCGT	GCCGC	GCC
J	GCGAA	GCGAT	GCGAC	GCGAG	GCGTA	GCGTT	GCGTC	GCGTG	GCGCA	GCGCT	GCGCC	GCGCG	GCGGA	GCGGT	GCGGC	GCC
4	GGAAA	GGAAT	GGAAC	GGAAG	GGATA	GGATT	GGATC	GGATG	GGACA	GGACT	GGACC	GGACG	GGAGA	GGAGT	GGAGC	GGA
	GGTAA	GGTAT	GGTAC	GGTAG	GGTTA	GGTTT	GGTTC	GGTTG	GGTCA	GGTCT	GGTCC	GGTCG	GGTGA	GGTGT	GGTGC	GGT
	GGCAA	GGCAT	GGCAC	GGCAG	GGCTA	GGCTT	GGCTC	GGCTG	GGCCA	GGCCT	GGCCC	GGCCG	GGCGA	GGCGT	GGCGC	GGC
-1	GGGAA	GGGAT	GGGAC	GGGAG	GGGTA	GGGTT	GGGTC	GGGTG	GGGCA	GGGCT	GGGCC	GGGCG	GGGGA	GGGGT	GGGGC	GGG

# Before filtering: read2: overrepresented sequences

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	6998 (0.016355%)	
AACCCTAACCCTAACCCTAACCCTAACCCTAACC	154 (0.000360%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23768 (0.055548%)	
AAGATGTGTATAAGAGACAG	242845 (0.283776%)	
ACACACACACACACACACACACACACACACACA	2341 (0.005471%)	
AC	54905 (0.128318%)	
AC	1712 (0.004001%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	2882 (0.006736%)	
ACACATCTAGATGTGTATAAGAGACAGCACACACACACAC	182 (0.000425%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	16832 (0.039338%)	
ACATCTAGATGTGTATAAGAGACAGCACACACACACACAC	225 (0.000526%)	
ACCCTAACCCTAACCCTAACCCTAACCC	220 (0.000514%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21464 (0.050163%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1402 (0.003277%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	26456 (0.061830%)	
AG	14183 (0.033147%)	
AGATCGGAAGAGCGTCGTGT	108057 (0.126270%)	
AGATGTGTATAAGAGACACACACACACACACACACACAC	18162 (0.042446%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	16426 (0.038389%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	37495 (0.087629%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22064 (0.051566%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACAC	169 (0.000395%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	40213 (0.093982%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	135 (0.000316%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGT	17452 (0.040787%)	
CAAGATGTGTATAAGAGACA	126163 (0.147427%)	
CACACACACACACACACACACACACACACACAAA	1526 (0.003566%)	
CACACACACACACACACACACACACACACACACACA	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%)	
CCCTAACCCTAACCCTAACCCTAACCCT	341 (0.000797%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	52671 (0.123097%)	
CCTAACCCTAACCCTAACCCTAACCCTA	333 (0.000778%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	617 (0.001442%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1335 (0.003120%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1798 (0.004202%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	319 (0.000746%)	
CTAACCCTAACCCTAACCCTAACCCTAA	187 (0.000437%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22633 (0.052895%)	
стстстстстстстстстстстстстстстстст	9629 (0.022504%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	96 (0.000224%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	74 (0.000173%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	4291 (0.010028%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	5154 (0.012045%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	8837 (0.020653%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	4578 (0.010699%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	4856 (0.011349%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	270 (0.000631%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	275 (0.000643%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	321 (0.000750%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	590 (0.001379%)	
CTGTCTCTTATACACATCTC	315409 (0.368570%)	
CTGTCTCTTATACACATCTG	330654 (0.386385%)	
CTGTCTCTTATACACATCTT	332587 (0.388643%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	71 (0.000166%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	21725 (0.050773%)	
GA	13380 (0.031270%)	
GAGATGTGTATAAGAGACAG	197777 (0.231112%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22080 (0.051603%)	
GATGTGTATAAGAGACAGACACACACACACACACACA	178 (0.000416%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGT	193 (0.000451%)	

GCACACACACACACACACACACACACACACACACACACA	22226 (0.051944%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	47171 (0.110243%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2019 (0.004719%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	4502 (0.010522%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	6556 (0.015322%)	
GGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19784 (0.046237%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	36434 (0.085150%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	105635 (0.246879%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	8759 (0.051176%)	
GGGGGGG	6787 (0.059085%)	
GGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGG	13238 (0.030938%)	
GGGGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	1112 (0.002599%)	
GGGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4185 (0.009781%)	
GGGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	3905 (0.009126%)	
GGTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	4350 (0.010166%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	158 (0.000369%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	122 (0.000285%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	33757 (0.078893%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	13967 (0.032642%)	
GTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	10379 (0.024257%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	200 (0.000467%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2406 (0.005623%)	
GTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGA	1823 (0.004261%)	
GTGTGTGTGTCTCTTATACACATCTAGATGTGTATAA	2728 (0.006376%)	
GTGTGTGTGTCTCTTATACACATCTAGATGTGTAT	1860 (0.004347%)	
GTGTGTGTGTGTCTCTTATACACATCTAGATGTGT	1667 (0.003896%)	
GTGTGTGTGTGTGTGTCTCTTATACACATCT	13390 (0.031294%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	1542 (0.003604%)	
<u> </u>	34421 (0.080445%)	
TAACCCTAACCCTAACCCTAACCCTAACCCTAAC	131 (0.000306%)	
TACACATCTAGATGTGTATAAGAGACAGCACACACACA	169 (0.000395%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	28425 (0.066432%)	

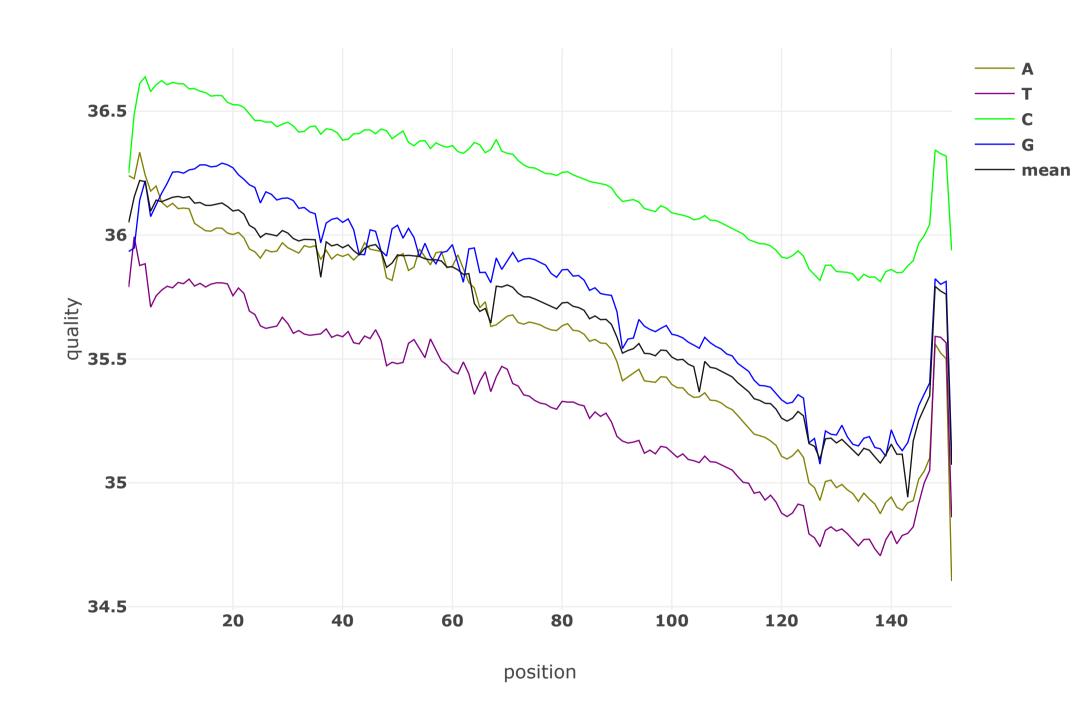
TATACACATCTAGATGTGTATAAGAGACAGCACACACACA	127 (0.000297%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	43752 (0.102252%)	
тстстстстстстстстстстстстстстстс	12741 (0.029777%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	57 (0.000133%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	65 (0.000152%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	10350 (0.024189%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	14937 (0.034909%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	44 (0.000103%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGTG	30 (0.000070%)	
TGAGATGTGTATAAGAGACA	142585 (0.166617%)	
TGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	46655 (0.109037%)	
TGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	5333 (0.031159%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCAC	277 (0.000647%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCCT	74 (0.000173%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCTC	107 (0.000250%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGCT	104 (0.000243%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGG	90 (0.000210%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGGT	75 (0.000175%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTA	118 (0.000276%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTC	122 (0.000285%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTG	304 (0.000710%)	
TGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTT	108 (0.000252%)	
TGTCTCTTATACACATCTCA	1069 (0.001249%)	
TGTCTCTTATACACATCTGG	950 (0.001110%)	
TGTCTCTTATACACATCTTG	871 (0.001018%)	
TGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	10397 (0.024299%)	
TGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGT	73 (0.000171%)	
TGTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAG	3780 (0.008834%)	
TGTGTGTGCTCTCTTATACACATCTAGATGTGTATAAG	1689 (0.003947%)	
TGTGTGTGTGCTCTCTTATACACATCTAGATGTGTATA	3226 (0.007539%)	
TGTGTGTGTGCTCTCTTATACACATCTAGATGTGTA	2019 (0.004719%)	
TGTGTGTGTGTGTCTCTTATACACATCTAGATGTG	2378 (0.005558%)	
TGTGTGTGTGTGTGTCTCTTATACACATCTAGATG	4587 (0.010720%)	

TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	37902 (0.088580%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACAC	57 (0.000133%)	

# After filtering

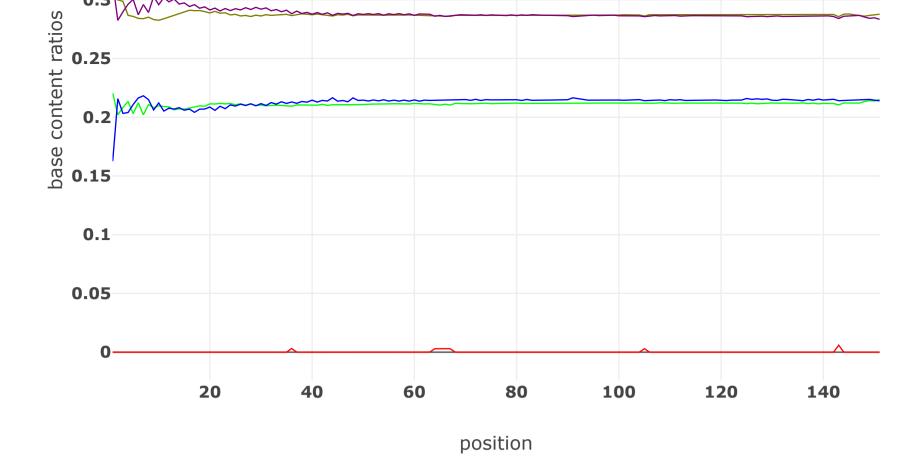
### After filtering: read1: quality

Value of each position will be shown on mouse over.



#### After filtering: read1: base contents





## After filtering: read1: KMER counting

AMA AAAAA AAAAT AAAAC AAAAA AAATT AAATT AATT		AA	AT	AC	AG	TA	TT	TC	TG	CA	СТ	CC	CG	GA	GT	GC	GG
AACA         AACACA         AACACA         AACTA         AATTA         ATTACA         ATTACAA         ATTACAA         ATTACAA         ATTACAA         ATTACAA         ATTACAA         ATTACAAA         ATTACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA																	AAAGG
AAGA AAGAA AATAA TATAA ATATAA ATATA																	AATGG
ATTA ATTAMA ATTAMA TITAMA TITAMA ATTAMA ATTA												-					AACGG
ATT A ATTAM ATTAM TATAM ATTAM ATTAM ATTTA ATTTM ATTTC ATTC A																	AAGGG ATAGG
ATC A TICAD ATCAT ATCAC																	ATAGG
ATGA ATGAL ACAD ACAD ACAD ACAD ACAD ACAD ACAD AC											-						ATCGG
ACT A ACTAT ACTAC ACTAC ACTAC ACTAC ACTAC ACTAC ACTAC ACCT ACCT ACCTC ACCTC ACCTC ACCTC ACCG ACCT ACCT												-					ATGGG
ACCA ACCAT ACCAT ACCAC ACCAG ACCTA ACCTT ACCTT ACCTT ACCTT ACCTG ACCCA ACCCA ACCCA ACCCA ACCCA ACCCA ACCACA ACCACACACACACACACACACACACACACACACACACACA	ACA	ACAAA	ACAAT	ACAAC	ACAAG	ACATA	ACATT	ACATC	ACATG	ACACA	ACACT	ACACC	ACACG	ACAGA	ACAGT	ACAGC	ACAGG
ACGA ACGAT ACGAT ACGAC ACGAG ACGTA ACGTT ACGTT ACGTC ACGTC ACGCT ACGCC ACGCA ACGCT ACGCC ACGAC ACCAC																	ACTGG
ΑΘΑΑ         ΑΘΑΑΤ         ΑΘΑΑΤ         ΑΘΑΑΤ         ΑΘΑΑΤ         ΑΘΑΕΤ         ΑΘΑΕΤ         ΑΘΑΕΤ         ΑΘΑΕΤ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΑΕΛ         ΑΘΕΛΑ         ΑΘΕΛΑ <th< th=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>ACCGG</td></th<>																	ACCGG
AGCT AGCAA AGCAT AGCAC AGCAG AGCTA AGCTT AGCTT AGCTC AGCTG AGCAC				1													ACGGG AGAGG
AGC A AGCAT AGCAC AGCAG AGCTA AGCTA AGCTT AGCTC AGCTG AGCCA AGCCT AGCCC AGCCA AGCGA												-					AGAGG
AGGA AGGAT AGGAT AGGAC AGGAG AGGTA AGGTT AGGTC AGGTC AGGTC AGGCC AGGCC AGGCC AGGCA AGGAT AGAC TAAAT TAAA TAAA																	AGCGG
TAAA				1													AGGGG
TACCA	TAA	TAAAA	TAAAT	TAAAC		TAATA	TAATT	TAATC	TAATG		TAACT	TAACC	TAACG	TAAGA		TAAGC	TAAGG
TAGG	TAT	TATAA	TATAT	TATAC	TATAG	TATTA	TATTT	TATTC	TATTG	TATCA	TATCT	TATCC	TATCG	TATGA	TATGT	TATGC	TATGG
THA																	TACGG
TITC TITAA TITAT TITAC TITAC TITAC TITAC TITAC TITAC TITAC TITAC TITAC TITCA TICTA TICTA TICTA TICTAC TICCA TICCA TICCA TICCA TICCC TICCC TICCC CTCGA TICCAT TICCC TICCC TICCA TICCAT TICCC TICCC TICCA TICCC TICCA TICCAT																	TAGGG
TTC TICAM TICAT TICAC TICAC TICAG TICTA TICTT TICTT TICTC TICCA TICCAT TICCA T							TTTTT	TTTTC					<del>                             </del>				TTAGG TTTGG
TIGA TIGAN TIGAT TIGAC TIGAC TIGAG TIGTA TIGTT TIGTC TIGTC TIGCT TIGCT TIGCC TIGCG TIGAG TIGGT TIGGC TIGAC TACAN TCANT TCANG TCANA TCANG T							TTCTT	TTCTC									TTCGG
TCA TCAAA TCAAT TCAAC TCAAC TCAAC TCAAC TCATA TCATT TCATC TCATC TCATC TCACC TCACC TCACG TCAGA TCAGT TCAGC TCACT TCTCT TCTTA TCTTT TCTTTC TCTTC TCTTC TCTCC TCTCC TCTCC TCTCC TCCCC T																	TTGGG
TICC TICCA TICCAT TICCAC TICCAG TICGAG TICGAG TICGAT TICCTT TICCT TICTG TICCAC TICCAT TICCC TICGA TICCAC TICGAG TICAGAG TICAG																	TCAGG
TIGA TIGAN T	TCT	TCTAA	TCTAT	TCTAC	TCTAG	TCTTA	TCTTT	TCTTC	TCTTG	TCTCA	TCTCT	TCTCC	TCTCG	TCTGA	TCTGT	TCTGC	TCTGG
TGA TGAAA TGAAT TGAAC TGAAG TGAAG TGAAA TGAAT TGTAC TGTAA TGTAA TGTAC TGTAC TGTAA TGTAC TGTAC TGTAC TGTAA TGTAC TGCAC TGCAC TGCAC TGCAC TGCAC TGCAC TGCAC TGCAC TGCCC TGCC TGCCC TGCC TGCCC TGCC TGCCC TGCCC TGCCC TGCC	TCC	TCCAA	TCCAT	TCCAC	TCCAG	TCCTA	TCCTT	TCCTC	TCCTG	TCCCA	TCCCT	TCCCC	TCCCG	TCCGA	TCCGT	TCCGC	TCCGG
TGT TGTAA TGTAT TGTAC TGTAG TGTAG TGTTA TGTTT TGTTC TGTG TGTCA TGCCT TGCCC TGCCG TGCAG TGCCT TGCCC TGCAC TGCCA TCCACA CAACA CACAA CA																	TCGGG
TGC TGCAA TGCAT TGCAC TGCAG TGCTA TGCTT TGCTC TGCTG TGCCA TGCCT TGCCC TGCCG TGCAC TGCGT TGGGC TGGGA TGGGT TGGGC TGAAAAT CAAAAT CAAAT CAAAAT CAAAT CAAAAT CAAAT CAAAAT CAAAT CAAAAT CAAAAT CAAAAT CAAAAT CAAAAT CAAAAT CAAAAT CAAAAT CAAA				-													TGAGG
TGG TGGAA TGGAT TGGAC TGGAG TGGTA TGGTT TGGTC TGGTG TGGCA TGGCA TGGCA TGGCA TGGGA TGGGA TGGGC CAAAA CAAAA CAAAT CAAAC CAAAC CAAAC CAACT CAACC CAACG CAAGA CAAGT CAAGT CAACA CAAACT CAACA CAACT CACAC CACAA CACAT CACAC CACAA CACAT CACAC CACAA CACAT CACAC CACACA CACAT CACAC CACACA CACAT CACAC CACAA CACAT CACAC CACAA CACAT CACAC CACAA CACAT CAGAG CAGAT CAGAT CAGTT CACTC CACTG CACCA CACCA CACCC CACCG CACGA CAGGA CAGGT CAGGA CAGGT CAGGA CAGAT CAGAT CAGGA CAGAT CAGAT CATAT CTAAC CTAAC CTAAC CTAAC CTAAT CTAAC CTAAC CTAAC CTAAT CTACC CTACG CAGGA CAGGT CAGAC CACAA CTACT CTAAC CTAAC CTAAC CTAAC CTAAC CTACA			1														TGTGG TGCGG
CAA CAAAA CAAAT CAAAC CAAAG CAATA CATT CATC CATG CAACG CAACG CAACG CAAGA CAACT CAACC CAT CATAA CATAT CATAC CATAG CATAA CATAT CATTT CATTC CATTG CATCA CATCT CATCG CATCG CATCG CATCG CACGA CACAA CACAT CACAC CACAG CACAG CACTA CACTT CACTC CACTG CACCA CACCT CACCG CACCGA CACGT CACGC CAC CACAA CACAT CACAC CACAG CACTA CACTT CACTC CACTG CACCA CACCT CACCC CACCG CACGA CACGT CAGCC CAG CAGAA CACAT CACAC CACAG CACTA CACTT CACTC CACTG CACCA CACCT CACCC CACCG CACGA CACGT CAGCC CAG CAGAA CAGAT CAGAC CAGAG CAGTA CAGTT CACTC CACTG CACCA CACCT CACCC CACCG CACGA CAGGT CAGGC CTA CTAAA CTAAT CTAAC CTAGC CTATA CTATT CTATC CTATG CTACA CTACT CTACC CTACG CTAGA CTAGT CTAGC CTT CTAAA CTAAT CTAAC CTAGC CTAGA CTATT CTATT CTATC CTATG CTACA CTACT CTACC CTACG CTAGA CTAGT CTAGC CTT CTAAA CTAAT CTAAC CTAGC CTAGA CTATT CTATT CTATT CTATT CTATC CTACC CTACC CTACG CTAGA CTAGT CTAGC CTC CTCAA CTCAT CTACC CTCAC CTCAG CTCTA CTTTT CTTTC CTTCC CTCCC CTCCC CTCCG CTCGA CTCGT CTGCC CTG CTGAA CTCAT CTACC CTCAC CTCAG CTCTA CTGTT CTGTC CTGTC CTCCC CTCCC CTCCG CTCGA CTCGT CTGCC CCCA CCAAA CCAAT CCAAC CCAAG CCATA CCATT CCATC CACCC CACGC CCACG CCAGA CCAGT CCACC CCCA CCCAAA CCCAAT CCAAC CCCAAG CCCTTA CCTTT CCTTC CCTTC CCTCC CCTCC CCCCC CCCGG CCCGA CCCGT CCCCC CCCAAA CCCAT CCCAC CCCAG CCCTA CCCTT CCCTC CCCTC CCCCC CCCCG CCCGA CCCGT CCGCC CCCC CCCAAA CCCAT CCCAC CCCAC CCCTT CCCTT CCCTC CCCTC CCCCC CCCCG CCCGA CCCGT CCGCC CCCG CCCGAA CCCAT CCCAC CCCAC CCCTT CCCTT CCCTC CCCTC CCCCC CCCCG CCCGA CCGGT CCGCC CCCGAA CCCAT CCCAC CCCAC CCCAC CCCTT CCCTC CCCTC CCCCC CCCCG CCCGA CCGGT CCGCC CCCG CCCGAA CCCAT CCCAC CCCAC CCCTT CCCTT CCTTC CCTTC CCTCC CCCC CCCCG CCCGA CCGGT CCGCC CCGC CCCAA CCCAT CCCAC CCCAC CCCTT CCCTC CCTCC CCCC CCCCC CCCCG CCCGA CCGGT CCGCC CCGC CCCAA CCCAT CCCAC CCCAC CCCTT CCCCC CCCCC CCCCC CCCCG CCCGA CCGGT CCGCC CCCC CCCAA CCCAT CCCAC CCCAC CCCTT CCCTC CCTCC CCCC CCCCC CCCCC CCCCC CCCCC CCCCC CCCCAA CCCAT CCCAC CCCAC CCCAC CCCTT CCCTC CCCTC CCCC CCCCC CCCCC CCCCCC																	TGGGG
CAT CATAA CATAT CATAC CATAG CATTA CATT CATT																	CAAGG
CAC CACAA CACAT CACAC CACAG CACTA CACTT CACTC CACTG CACCA CACCT CACCG CACCG CACCG CACCG CACGA CACGT CACGC CACCG CACGA CACGT CACGC CACCA CACGT CACGC CACCA CACGT CACCG CACCA CA				1													CATGG
CTA CTAAA CTAAT CTAAC CTAAG CTATA CTATC CTATC CTATG CTACA CTACT CTACC CTACG CTACG CTACG CTACG CTACG CTACG CTACT CTACC CTTCT CTTC CTTC	CAC	CACAA				CACTA	CACTT	CACTC	CACTG	CACCA	CACCT	CACCC	CACCG	CACGA	CACGT	CACGC	CACGG
CTT CTCAA CTCAT CTCAC CTCAG CTCTA CTCTT CTCTC CTCG CTCCA CTCCT CTCCC CTCAG CTCGA CTCGT CTCGC CTCAA CTCAT CTCAC CTCAG CTCTA CTCTT CTCTC CTCTG CTCCA CTCCT CTCCC CTCCG CTCGA CTCGT CTCGC CTC				CAGAC													CAGGG
CTC CTCAA CTCAT CTCAC CTCAG CTCTA CTCTT CTCTC CTCTG CTCCA CTCCT CTCCC CTCCG CTCAG CTCGT CTCCC CTCG CTCAG CCCA CCCA																	CTAGG
CTG CTGAA CTGAT CTGAC CTGAG CTGTA CTGTT CTGTC CTGTG CTGCA CTGCT CTGCC CTGCG CTGGA CTGGT CTGGC CCA CCAAA CCAAT CCAAC CCAAG CCATA CCATT CCATC CCATG CCACA CCACT CCACC CCACG CCAGA CCAGT CCAGC CCT CCTAA CCTAT CCTAC CCTAG CCTTA CCTTT CCTTC CCTTG CCTCA CCTCC CCTCC CCTCG CCTGA CCTGT CCAGC CCC CCCAA CCCAT CCCAC CCCAG CCTTA CCTTT CCTTC CCTTC CCTCC CCCCC CCCGG CCGAA CCCGT CCCCC CCC CCCAA CCCAT CCCAC CCCAG CCTTA CCTTT CCCTC CCCCC CCCCG CCCGA CCCGT CCCCCC CCG CCGAA CCGAT CCGAC CCGAG CCGTA CCGTT CCGTC CCCCC CCCCC CCCGC CCGGA CCGGT CCGGC CGG CGGAA CGGAT CGGAC CGGAG CGGTA CCGTT CCGTC CCGTC CCGCC CCGCG CCGGA CCGGT CCGGC CGG CGGAA CGGAT CGAAC CGAAG CGATA CGATT CGATC CGATC CGACC CGCCC CGCGC CCGGA CCGGT CCGGC CGC CGCAA CGCAT CGCAC CGCAG CGCTA CCGTT CGATC CGTC CG								_									CTTGG
CCA CCAAA CCAAT CCAAC CCAAG CCATA CCATT CCATC CCATG CCACA CCACT CCACC CCACG CCAGA CCAGT CCAGC CCT CCTAA CCTAT CCTAC CCTAG CCTTA CCTTC CCTTC CCTTC CCTC CC				1													CTCGG CTGGG
CCT CCTAA CCTAT CCTAC CCTAG CCTTA CCTTT CCTTC CCTTG CCTCA CCTCT CCTCC CCTCG CCTGA CCTGT CCTGC CCC CCCAA CCCAT CCCAC CCCAG CCCTA CCCTT CCCTC CCCTG CCCCA CCCCT CCCCC CCCGG CCCGA CCCGT CCCGC CCGAA CCGAT CCGAC CCGAG CCCTA CCGTT CCGTC CCGTG CCGCA CCCCT CCCCC CCCGG CCGGA CCGGT CCGGC CCGA CCGAAA CCGAAT CCGAC CCGAG CCGTA CCGTT CCGTC CCGTG CCGCA CCGCT CCGCC CCGCG CCGGA CCGGT CCGGC CGA CCGAAA CGAAT CGAAC CGAAG CGATA CGATT CGATC CGATC CGATG CGACA CGACT CGACC CGACG CGAGA CGAGT CGAGC CGT CGTAA CGTAT CGTAC CGTAG CGTTA CGTTT CGTTC CGTTG CGTCA CGTCT CGTCC CGTCG CGCGA CGAGA CGAGT CGAGC CGC CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGG CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGG CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGG CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGG CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCGA CGCGT CGCGC CGG CGCAA CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCCC CGCCG CGCGA CGCGT CGCCC CGCG CGCAA C																	CCAGG
CCC CCCAA CCCAT CCCAC CCCAG CCCTA CCCTT CCCTC CCCTG CCCCA CCCCT CCCCC CCCCG CCCGA CCCGT CCCCC CCCG CCCG			<del></del>					-									CCTGG
CGA CGAAA CGAAT CGAAC CGAAG CGATA CGATT CGATC CGATG CGACA CGACT CGACC CGACG CGAGA CGAGT CGAGC CGT CGT CGT CGT CGT CGT CGT CGT CGT C	CCC	CCCAA	CCCAT	1		CCCTA	CCCTT	-				ccccc					CCCGG
CGT CGTAA CGTAT CGTAC CGTAG CGTTA CGTTT CGTTC CGTTG CGTCA CGTCT CGTCC CGTCG CGTCA CGTGT CGTGC CGCC CGC	CCG	CCGAA	CCGAT		CCGAG	CCGTA	CCGTT	CCGTC	CCGTG	CCGCA	CCGCT	CCGCC	CCGCG	CCGGA	CCGGT	CCGGC	CCGGG
CGC CGCAA CGCAT CGCAC CGCAG CGCTA CGCTT CGCTC CGCTG CGCCA CGCCT CGCCC CGCCG CGCAA CGCGT CGCGC CGGCG CGCAA CGCGT CGCGC CGGCA CGCGC CGGAA CGAAA CGAAAA GAAAA G																	CGAGG
CGG CGGAA CGGAT CGGAC CGGAG CGGTA CGGTT CGGTC CGGTG CGGCA CGGCT CGGCC CGGCG CGGGA CGGGT CGGCC GAA GAAAA GAAAT GAAAC GAAAG GAATA GAATT GAATC GAATG GAACA GAACT GAACC GAACG GAAGA GAAGT GAAGC GAT GATAA GATAT GATAC GATAG GATTA GATTT GATTC GATTG GATCA GACCT GACCC GACCG GACGA GACGT GACGC GAC GACAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GAG GAGAA GAGAT GAGAC GAGAG GAGTA GAGTT GAGTC GAGTG GAGCA GAGCT GAGCC GAGCG GAGGA GAGGT GAGGC GTA GTAAA GTAAT GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTC GTCAA GTCAT GTCAC GTCAG GTCTA GTCTT GTCTC GTCTC GTCCC GTCCG GTCCG GTCGA GTCGT GTCGC GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTCTC GTCCC GTCCC GTCCG GTCGA GTCGT GTGGC GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGCC GTGCC GTGCG GTGGA GTGGT GTGGC GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCACC GCACC GCACG GCAGA GCAGT GCAGC GCAAA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCACC GCACC GCACG GCAGA GCAGT GCAGC GCAAA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCACC GCACC GCACG GCAGA GCAGT GCAGC GCAAA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCACC GCACC GCACG GCAGA GCAGT GCAGC											-	-					CGTGG
GAA GAAAA GAAAT GAAAC GAAAG GAATA GAATT GAATC GAATG GAACA GAACT GAACC GAACG GAAGA GAAGT GAAGC GAT GATAA GATAT GATAC GATAG GATTA GATTT GATTC GATTG GATCA GACCT GACCC GACCG GACGA GACGT GATGC GAC GAC GACAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GAG GAGAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GAG GAGAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GTA GTAAA GTAAT GTAAC GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTC GTC GTCAA GTCAT GTCAC GTCAA GTCAT GTCAC GCCACC GCCC GCCACC GCCACC GCCACC GCCACC GCCC GC								-									CGCGG
GAT GATAA GATAT GATAC GATAG GATTA GATTT GATTC GATTG GATCA GATCT GATCC GATCG GATCA GATGT GATGC GAC GACAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GAG GAGAA GAGAT GAGAC GAGAG GAGTA GAGTT GAGTC GAGTG GAGCA GAGCT GAGCC GAGCG GAGGA GAGGT GAGGC GTA GTAAA GTAAT GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTT GTTAA GTTAT GTTAC GTTAG GTTTA GTTTT GTTTC GTTTG GTTCA GTTCT GTCC GTCC												-					CGGGG GAAGG
GAC GACAA GACAT GACAC GACAG GACTA GACTT GACTC GACTG GACCA GACCT GACCC GACCG GACGA GACGT GACGC GAG GAGAA GAGAT GAGAC GAGAG GAGTA GAGTT GAGTC GAGTG GAGCA GAGCT GAGCC GAGCG GAGGA GAGGT GAGGC GTA GTAAA GTAAT GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTT GTTAA GTTAT GTTAC GTTAG GTTTA GTTTT GTTTC GTTTG GTTCA GTTCT GTCC GTCG GTCG								-			-						GATGG
GAG GAGAA GAGAT GAGAC GAGAG GAGTA GAGTT GAGTC GAGTG GAGCA GAGCT GAGCC GAGCG GAGGA GAGGT GAGGC GTA GTAAA GTAAT GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTT GTTAA GTTAT GTTAC GTTAG GTTTA GTTTT GTTTC GTTTC GTTCA GTTCT GTTCC GTTCG GTCGA GTCGA GTCGT GTC GTCAA GTCAT GTCAC GTCAG GTCTA GTCTT GTCTC GTCTC GTCCA GTCCT GTCCC GTCCG GTCGA GTCGT GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGTC GTGCA GTGCT GTGCC GTGCG GTGGA GTGGT GTGGC GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCACC GCACC GCACG GCAGA GCAGT GCAGC																	GACGG
GTA GTAAA GTAAT GTAAC GTAAG GTATA GTATT GTATC GTATG GTACA GTACT GTACC GTACG GTAGA GTAGT GTAGC GTT GTTAA GTTAT GTTAC GTTAG GTTTA GTTTT GTTTC GTTTG GTTCA GTTCT GTTCC GTTCG GTTCG GTTCG GTTCG GTC GTCAA GTCAT GTCAC GTCAG GTCTA GTCTT GTCTC GTCTG GTCCA GTCCT GTCCC GTCCG GTCGA GTCGT GTCGC GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGTG GTGCA GTGCT GTGCC GTGCG GTGGA GTGGT GTGGC GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCATC GCACA GCACT GCACC GCACG GCAGA GCAGT GCAGC												GAGCC					GAGGG
GTC GTCAA GTCAT GTCAC GTCAG GTCTA GTCTT GTCTC GTCTG GTCCA GTCCT GTCCC GTCCG GTCGA GTCGT GTCGC GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGTG GTGCA GTGCT GTGCC GTGCG GTGGA GTGGT GTGGC GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCATG GCACA GCACT GCACC GCACG GCAGA GCAGT GCAGC	GTA		GTAAT	GTAAC		GTATA					GTACT	GTACC		GTAGA		GTAGC	GTAGG
GTG GTGAA GTGAT GTGAC GTGAG GTGTA GTGTT GTGTC GTGTG GTGCA GTGCT GTGCC GTGCG GTGGA GTGGT GTGGC GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCATG GCACA GCACT GCACC GCACG GCAGA GCAGT GCAGC											•						GTTGG
GCA GCAAA GCAAT GCAAC GCAAG GCATA GCATT GCATC GCATG GCACA GCACT GCACC GCACG GCAGA GCAGT GCAGC																	GTCGG
																	GTGGG
delig deligit																	GCAGG 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

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
GGG GGGAA GGGAT GGGAC GGGAG GGGTA GGGTT GGGTC GGGTC GGGCA GGGCT GGGCC GGGGG GGGGA GGGGT GGGGC GGGGG

## After filtering: read1: overrepresented sequences

overrepresented sequence	count (% of bases)	distribution: cycle 1 ∼ cycle 151
AACACACACACACACACACACACACACACACACACACACA	12832 (0.038294%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	24761 (0.073894%)	
AAGATGTGTATAAGAGACAG	208641 (0.311322%)	
ACACACACACACACACACACACACACACACACA	365 (0.001089%)	
AC	12265 (0.036602%)	
AC	388 (0.001158%)	
ACACACACACACACACACACACACACACACACACA	292 (0.000871%)	
ACACACACCTGTCTCTTATACACATCTAGATGTGTATAAG	1279 (0.003817%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	2996 (0.008941%)	
ACACATCTAGATGTGTATAAGAGACAGGTGTGTGTGTG	71 (0.000212%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	17848 (0.053264%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22038 (0.065768%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1538 (0.004590%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	11711 (0.034949%)	
AG	9921 (0.029607%)	
AGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG	282 (0.002104%)	
AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	11715 (0.034961%)	
AGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	23003 (0.068648%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	26195 (0.078173%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22621 (0.067508%)	
ATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	78 (0.000233%)	
ATCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	16443 (0.049071%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	42823 (0.127796%)	
ATGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22899 (0.068337%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	56 (0.000167%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	13402 (0.039995%)	
CAAGATGTGTATAAGAGACA	105543 (0.157485%)	
CACACACACACACACACACACACACACACACAAA	784 (0.002340%)	
CACACACACACACACACACACACACACACACACACACA	10199 (0.030437%)	
CACACACACACACACACACACACACACACACACACAC	288 (0.000859%)	

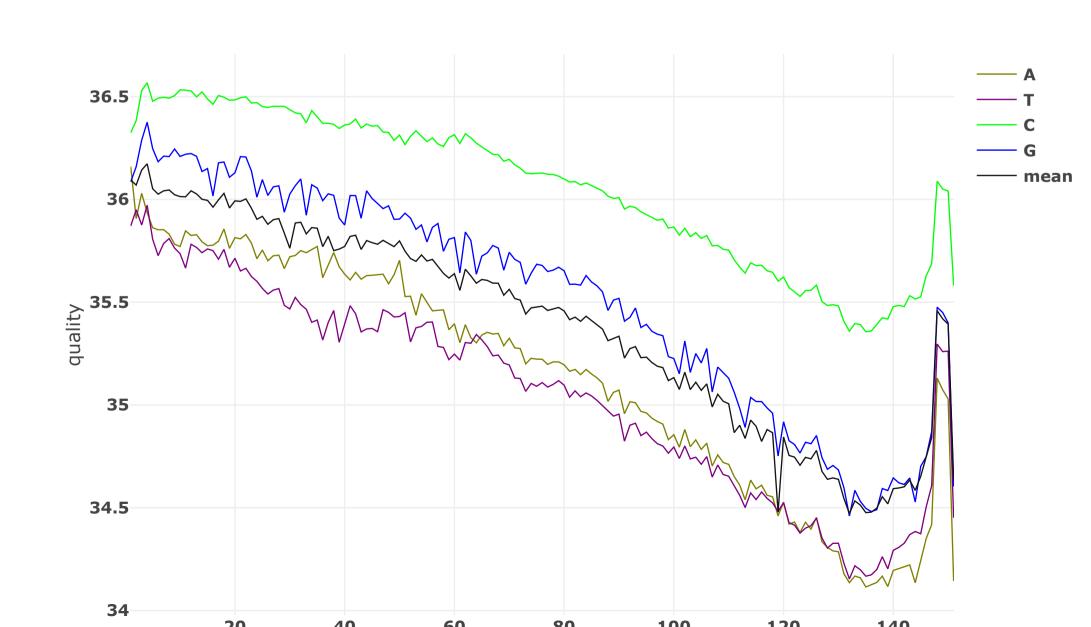
CACACACACACACACACACACACACACACACACAGA	671 (0.002002%)	
CACACACACACACACCTGTCTCTTATACACATCT	13691 (0.040858%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAA	11447 (0.034161%)	
CACACACCTGTCTCTTATACACATCTAGATGTGTATAAGA	2196 (0.006553%)	
CACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	5090 (0.015190%)	
CACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	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%)	
стстстстстстстстстстстстстстстст	3399 (0.010144%)	
CTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	18294 (0.054595%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGCACACA	58 (0.000173%)	
CTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTGT	31 (0.000093%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAC	1387 (0.004139%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAG	715 (0.002134%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGAT	1672 (0.004990%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCA	3926 (0.011716%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCC	2237 (0.006676%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGCT	2464 (0.007353%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGA	310 (0.000925%)	
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CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	400 (0.001194%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	696 (0.002077%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTA	650 (0.001940%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGTC	1148 (0.003426%)	
CTGTCTCTTATACACATCTC	287204 (0.428550%)	

CTGTCTCTTATACACATCTG	313989 (0.468517%)	
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СТGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	13450 (0.040139%)	
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GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	22327 (0.066630%)	
GACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	19560 (0.058373%)	
GA	9639 (0.028766%)	
GAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGA	319 (0.002380%)	
GAGATGTGTATAAGAGACAG	168973 (0.252132%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19388 (0.057859%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGT	127 (0.000379%)	
GCACACACACACACACACACACACACACACACACACACA	18612 (0.055544%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	25989 (0.077559%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	2090 (0.006237%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	4379 (0.013068%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	6974 (0.020812%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	1199 (0.003578%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	36256 (0.108198%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	9 (0.000027%)	
GGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	7224 (0.021558%)	
GTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTGTG	39 (0.000116%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	87 (0.000260%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	113 (0.000337%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	35192 (0.105023%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	13327 (0.039772%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	79 (0.000236%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	2207 (0.006586%)	
GTGTGTGCTCTCTTATACACATCTAGATGTGTATAAGA	1739 (0.005190%)	
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GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	601 (0.001794%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	17885 (0.053374%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTTTT	437 (0.001304%)	

TACACACACACACACACACACACACACACACACACACA	13802 (0.041189%)	
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TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	29633 (0.088433%)	
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TCACACACACACACACACACACACACACACACACACACA	12730 (0.037990%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	28231 (0.084249%)	
тстстстстстстстстстстстстстстстстс	4532 (0.013525%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	51 (0.000152%)	
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TGAGATGTGTATAAGAGACA	120964 (0.180496%)	
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TGTCTCTTATACACATCTGA	448 (0.000668%)	
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TGTGTGTGTGTCTCTTATACACATCTAGATGTGTATA	20761 (0.061957%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGAG	857 (0.002558%)	
тстстстстстстстстстстстстстстс	4335 (0.012937%)	
тдтдтдтдтдтдтдтдтдтдтдтдтдтдтт	131 (0.000391%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACAC	34 (0.000101%)	
TTATACACATCTAGATGTGTATAAGAGACAGGTGTGTGTG	31 (0.000093%)	
TTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT	10846 (0.032368%)	

# After filtering: read2: quality

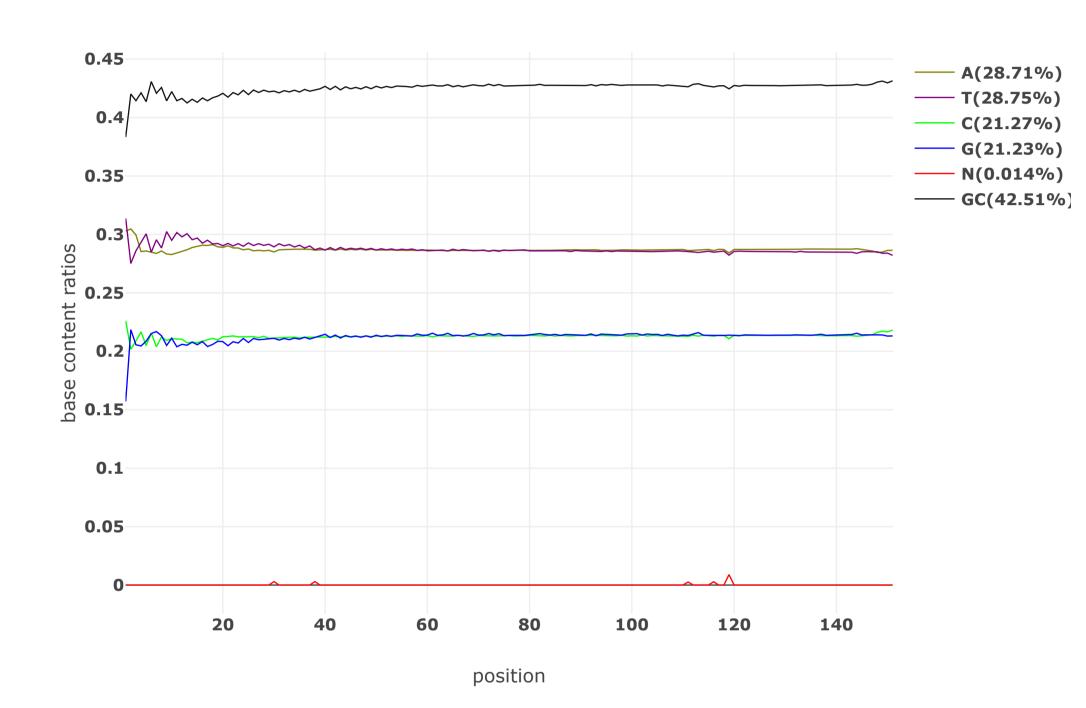


20 40 00 80 100 120 140

position

## After filtering: read2: base contents

Value of each position will be shown on mouse over.



### After filtering: read2: KMER counting

	AA	AT	AC	AG	TA	TT	TC	TG	CA	CT	CC	CG	GA	GT	GC	GG
AAA	AAAA	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	AACTT	AACTC	AACTG	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	ATTTC	ATTTG	ATTCA	ATTCT	ATTCC	ATTCG	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	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
TTT	TTTAA	TTTAT	TTTAC	TTTAG	TTTTA	TTTTT	TTTTC	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
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	TGTTC	TGTTG	TGTCA	TGTCT	TGTCC	TGTCG	TGTGA	TGTGT	TGTGC	TGTGG
TGC	TGCAA	TGCAT	TGCAC	TGCAG	TGCTA	TGCTT	TGCTC	TGCTG	TGCCA	TGCCT	TGCCC	TGCCG	TGCGA	TGCGT	TGCGC	TGCGG
TGG	TGGAA	TGGAT	TGGAC	TGGAG	TGGTA	TGGTT	TGGTC	TGGTG	TGGCA	TGGCT	TGGCC	TGGCG	TGGGA	TGGGT	TGGGC	TGGGG
CAA	CAAAA	CAAAT	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	СТСТТ	СТСТС	CTCTG	CTCCA	СТССТ	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	ССТСТ	CCTCC	CCTCG	CCTGA	CCTGT	CCTGC	CCTGG
CCC	CCCAA	CCCAT	CCCAC	CCCAG	CCCTA	CCCTT	CCCTC	CCCTG	CCCCA	CCCCT	CCCCC	CCCCG	CCCGA	CCCGT	CCCGC	CCCGG
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	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	GTTCG	GTTGA	GTTGT	GTTGC	GTTGG
GTC	GTCAA	GTCAT	GTCAC	GTCAG	GTCTA	GTCTT	GTCTC	GTCTG	GTCCA	GTCCT	GTCCC	GTCCG	GTCGA	GTCGT	GTCGC	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
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
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

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 151
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	42 (0.000126%)	
AACCCTAACCCTAACCCTAACCCTAACCCTAACC	42 (0.000126%)	
AACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	20684 (0.061845%)	
AAGATGTGTATAAGAGACAG	213303 (0.318885%)	
ACACACACACACACACACACACACACACACACACA	1201 (0.003591%)	
AC	35980 (0.107579%)	
ACACACACACACACACACACACACACACACACACACA	1013 (0.003029%)	
ACACACCTGTCTCTTATACACATCTAGATGTGTATAAGAG	2507 (0.007496%)	
ACACATCTAGATGTGTATAAGAGACAGCACACACACACAC	101 (0.000302%)	
ACACCTGTCTCTTATACACATCTAGATGTGTATAAGAGAC	14968 (0.044754%)	
ACATCTAGATGTGTATAAGAGACAGCACACACACACACAC	145 (0.000434%)	
ACCCTAACCCTAACCCTAACCCTAACCCTAACCC	73 (0.000218%)	
ACCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	18976 (0.056738%)	
ACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	1218 (0.003642%)	
ACTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	23288 (0.069630%)	
AG	7894 (0.023603%)	
AGATCGGAAGAGCGTCGTGT	259 (0.000387%)	
AGATGTGTATAAGAGACAGCACACACACACACACACAC	13823 (0.041330%)	

AGATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTG	11500 (0.034385%)	
AGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	33423 (0.099934%)	
AGGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19502 (0.058310%)	
ATACACATCTAGATGTGTATAAGAGACAGCACACACACAC	109 (0.000326%)	
ATCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	36215 (0.108282%)	
ATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTG	64 (0.000191%)	
ATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	10785 (0.032247%)	
CAAGATGTGTATAAGAGACA	108761 (0.162596%)	
CACACACACACACACACACACACACACACACAAA	745 (0.002228%)	
CACACACACACACACACACACACACACACACACACA	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%)	
CCCTAACCCTAACCCTAACCCTAACCCT	148 (0.000443%)	
CCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	46658 (0.139506%)	
CCTAACCCTAACCCTAACCCTAACCCTA	179 (0.000535%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	540 (0.001615%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	1078 (0.003223%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	1534 (0.004587%)	
CCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGT	263 (0.000786%)	
CTAACCCTAACCCTAACCCTAACCCTAACCCTAA	75 (0.000224%)	
CTCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19694 (0.058884%)	
стстстстстстстстстстстстстстстст	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%)	

CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGC	286 (0.000855%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGG	288 (0.000861%)	
CTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGGT	483 (0.001444%)	
CTGTCTCTTATACACATCTC	277416 (0.414733%)	
CTGTCTCTTATACACATCTG	290966 (0.434990%)	
CTGTCTCTTATACACATCTT	297603 (0.444912%)	
CTTATACACATCTAGATGTGTATAAGAGACAGCACACACA	31 (0.000093%)	
GACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19678 (0.058837%)	
GA	7571 (0.022637%)	
GAGATGTGTATAAGAGACAG	171197 (0.255937%)	
GAGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	19128 (0.057192%)	
GATGTGTATAAGAGACAGCACACACACACACACACACACA	121 (0.000362%)	
GATGTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGT	155 (0.000463%)	
GCACACACACACACACACACACACACACACACACACAC	15060 (0.045029%)	
GCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	42160 (0.126057%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGA	1831 (0.005475%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	3858 (0.011535%)	
GCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	5872 (0.017557%)	
GGCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	17628 (0.052707%)	
GGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	32387 (0.096836%)	
GGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	6 (0.000018%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGCACA	86 (0.000257%)	
GTCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGT	81 (0.000242%)	
GTCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	29918 (0.089454%)	
GTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	12041 (0.036002%)	
GTGTATAAGAGACAGGTGTGTGTGTGTGTGTGTGTGTG	112 (0.000335%)	
GTGTGCTGTCTCTTATACACATCTAGATGTGTATAAGAGA	1848 (0.005525%)	
GTGTGTGCTGTCTTATACACATCTAGATGTGTATAAGA	1537 (0.004596%)	
GTGTGTGTGCTGTCTCTTATACACATCTAGATGTGTATAA	2329 (0.006964%)	
GTGTGTGTGTGTCTCTTATACACATCTAGATGTGTAT	1503 (0.004494%)	
GTGTGTGTGTGTCTCTTATACACATCTAGATGTGT	1394 (0.004168%)	
GTGTGTGTGTGTGTGTGCTGTCTCTTATACACATCT	11485 (0.034340%)	
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGA	717 (0.002144%)	

GT	20765 (0.062087%)	
TAACCCTAACCCTAACCCTAACCCTAACCCTAAC	38 (0.000114%)	
TACACATCTAGATGTGTATAAGAGACAGCACACACACA	129 (0.000386%)	
TACCTGTCTCTTATACACATCTAGATGTGTATAAGAGACA	25099 (0.075045%)	
TATACACATCTAGATGTGTATAAGAGACAGCACACACA	73 (0.000218%)	
TCCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAG	38705 (0.115727%)	
тстстстстстстстстстстстстстстстс	7626 (0.022802%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	48 (0.000144%)	
TCTCTTATACACATCTAGATGTGTATAAGAGACAGGTGTG	32 (0.000096%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGC	8840 (0.026431%)	
TCTGTCTCTTATACACATCTAGATGTGTATAAGAGACAGG	13325 (0.039841%)	
TCTTATACACATCTAGATGTGTATAAGAGACAGCACAC	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%)	
TGTGTGTGCTCTCTTATACACATCTAGATGTGTATAAG	1421 (0.004249%)	
TGTGTGTGTCTCTTATACACATCTAGATGTGTATA	2718 (0.008127%)	

TGTGTGTGTGTCTCTTATACACATCTAGATGTGTA	1673 (0.005002%)	
TGTGTGTGTGTGTCTCTTATACACATCTAGATGTG	2062 (0.006165%)	
TGTGTGTGTGTGTGTCTCTTATACACATCTAGATG	3906 (0.011679%)	
TGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG	21360 (0.063866%)	
TTATACACATCTAGATGTGTATAAGAGACAGCACACAC	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 -0 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

fastp 0.19.4, at 2018-10-07 00:07:18