Rfastp Report

Summary

General

fastp version:	0.21.0 (https://github.com/OpenGene/fastp)
sequencing:	single end (76 cycles)
mean length before filtering:	76bp
mean length after filtering:	73bp
duplication rate:	18.201572% (may be overestimated since this is SE data)
Detected read1 adapter:	AGATCGGAAGAGCACACGTCTGAACTCCAGTCA

Before filtering

total reads:	8.018967 M
total bases:	609.441492 M
Q20 bases:	587.195368 M (96.349752%)
Q30 bases:	550.893157 M (90.393116%)
GC content:	45.518868%

After filtering

total reads:	7.874054 M
total bases:	578.981569 M
Q20 bases:	564.779209 M (97.547010%)
Q30 bases:	531.300484 M (91.764663%)
GC content:	45.211167%

Filtering result

reads passed filters:	7.874054 M (98.192872%)
reads with low quality:	141.565000 K (1.765377%)
reads with too many N:	151 (0.001883%)
reads too short:	3.197000 K (0.039868%)

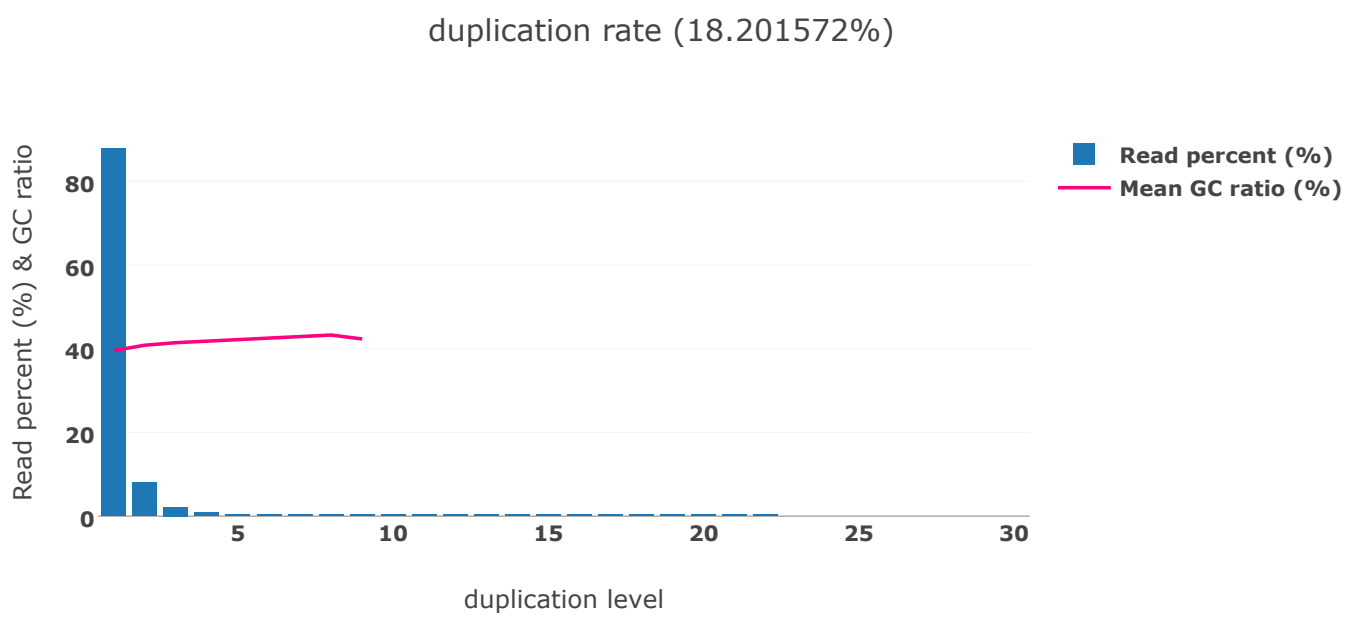
Adapters

Adapter or bad ligation of read1

Sequence	Occurrences
AGATC	69596
AGATCG	60266
AGATCGG	58882
AGATCGGA	61801
AGATCGGAA	58076
AGATCGGAAG	54686
AGATCGGAAGA	54229
AGATCGGAAGAG	54533
AGATCGGAAGAGC	49850
AGATCGGAAGAGCA	47829
AGATCGGAAGAGCAC	46349
AGATCGGAAGAGCACA	45058

AGATCGGAAGAGCACAC	43914
AGATCGGAAGAGCACACG	42657
AGATCGGAAGAGCACACGT	39340
AGATCGGAAGAGCACACGTC	38799
AGATCGGAAGAGCACACGTCT	36390
AGATCGGAAGAGCACACGTCTG	33549
AGATCGGAAGAGCACACGTCTGA	30270
AGATCGGAAGAGCACACGTCTGAA	27578
AGATCGGAAGAGCACACGTCTGAAC	25022
AGATCGGAAGAGCACACGTCTGAACT	21888
AGATCGGAAGAGCACACGTCTGAACTC	21046
AGATCGGAAGAGCACACGTCTGAACTCC	19293
AGATCGGAAGAGCACACGTCTGAACTCCA	18988
AGATCGGAAGAGCACACGTCTGAACTCCAG	16536
AGATCGGAAGAGCACACGTCTGAACTCCAGT	13346
AGATCGGAAGAGCACACGTCTGAACTCCAGTC	13950
other adapter sequences	103925

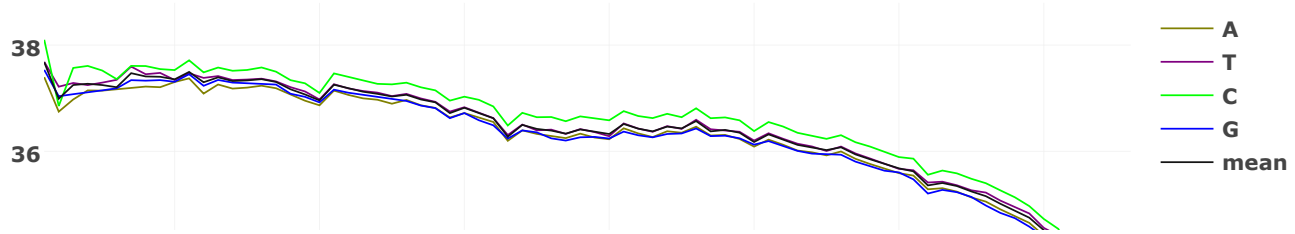
Duplication

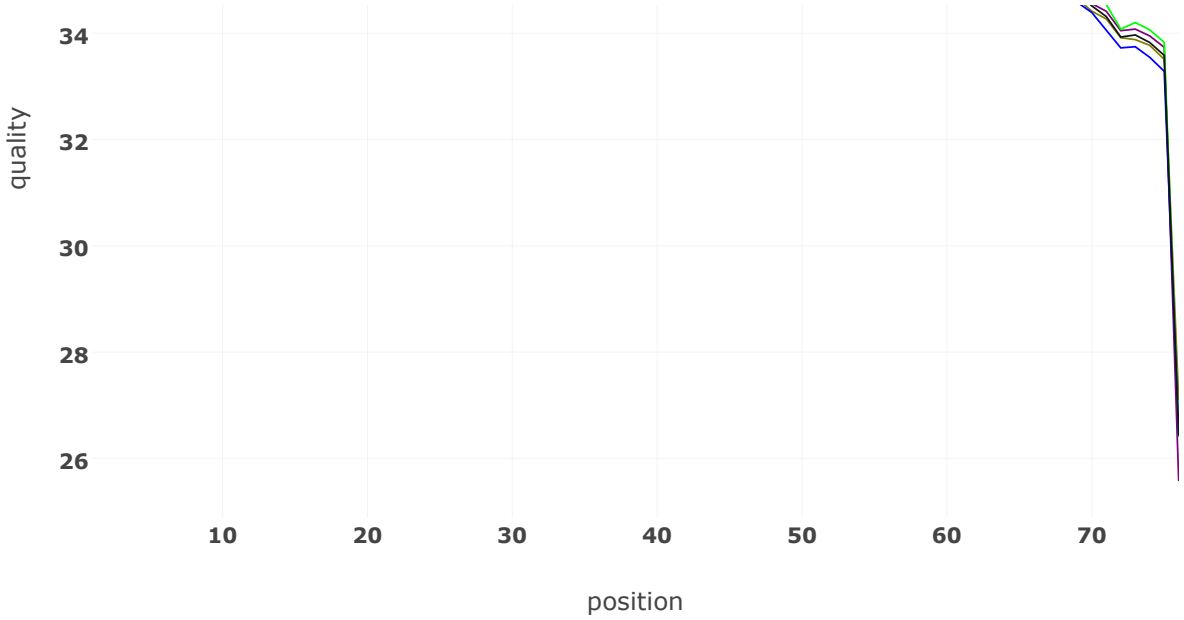


Before filtering

Before filtering: read1: quality

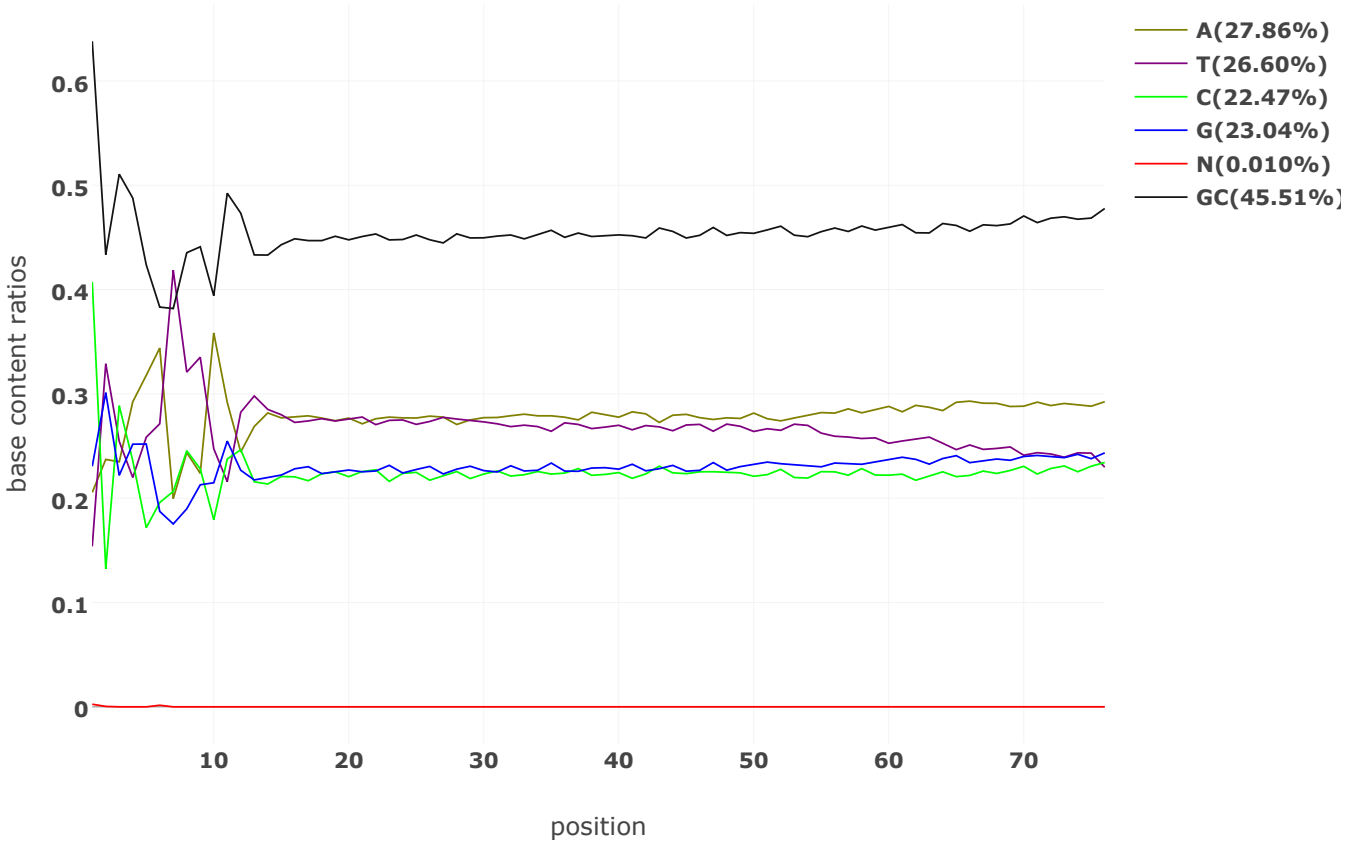
Value of each position will be shown on mouse over.





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	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	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	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

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 76
AAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAATT	130 (0.017065%)	
AAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTT	194 (0.025466%)	
AAAAACATGTCTTTTTGAATTATATATAAAGTCTAACCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTG	413 (0.100295%)	
AAAAAGATTGCGACCTCGATGTTGGATTAAGATATAATTT	15 (0.001969%)	
AAAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTT	21 (0.002757%)	
AAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTT	52 (0.006826%)	
AAAAGATTGCGACCTCGATGTTGGATTAAGATATAATTTT	42 (0.005513%)	
AAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTG	19 (0.002494%)	
AAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTG	13 (0.001706%)	
AAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGT	28 (0.003675%)	
AAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAAT	30 (0.003938%)	
AAACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAACA	6 (0.000788%)	
AAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAAGA	9 (0.001181%)	
AAAGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAA	144 (0.018903%)	
AAAGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAA	460 (0.060383%)	
AAAGATTGCGACCTCGATGTTGGATTAAGATATAATTTTG	29 (0.003807%)	
AAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGA	12 (0.001575%)	
AAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGA	105 (0.013783%)	

AAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAAT	8 (0.001050%)	
AAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGG	52 (0.006826%)	
AAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAG	13 (0.001706%)	
AAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTA	24 (0.003150%)	
AACAAAAACATGTCTTTTTGAATTATATATAAAGTCTAAC	14 (0.001838%)	
AACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAA	65 (0.008532%)	
AACATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAA	416 (0.054607%)	
AACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATT	46 (0.006038%)	
AACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAACAA	17 (0.002232%)	
AACGGCTACACCCAAAATTATATCTTAATCCAACATCGAG	317 (0.041612%)	
AAGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAA	50 (0.006563%)	
AAGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAA	97 (0.012733%)	
AAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGCT	26 (0.003413%)	
AAGACAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTG	28 (0.003675%)	
AAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAG	13 (0.001706%)	
AAGAGCACACGTCTGAACTC	18 (0.001181%)	
AAGAGCACACGTCTGAACTCCAGTCACTGACCAATCTCGT	6 (0.000788%)	
AAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCT	14 (0.001838%)	
AAGATCGGAAGAGCACACGT	2647 (0.173733%)	
AAGATTGCGACCTCGATGTTGGATTAAGATATAATTTTGG	29 (0.003807%)	
AAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTT	34 (0.004463%)	
AAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAA	22 (0.002888%)	
AAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTAT	9 (0.001181%)	
AATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAA	11 (0.001444%)	
AATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAGC	11 (0.001444%)	
AATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTG	41 (0.005382%)	
AATGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAA	7 (0.000919%)	
AATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTA	41 (0.005382%)	
AATGGTATGCGTAGAAGTGTTTGGCGTAAGCCTGCATGGA	6 (0.000788%)	
AATGGTTGGACGAAATATTAACTGTTTCATTTAAAATTTT	8 (0.001050%)	
AATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGA	58 (0.007614%)	
AATTAGGGGAGGAAAAGAAACTAACAAGGATTTTCTTAGT	8 (0.001050%)	
AATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACAT	13 (0.001706%)	
AATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGG	28 (0.003675%)	
AATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAG	16 (0.002100%)	
AATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCT	47 (0.006170%)	
AATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGAC	14 (0.001838%)	
AATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGA	42 (0.005513%)	
ACAGATCGGAAGAGCACACG		

	2179 (0.143016%)	
ACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTA	12 (0.001575%)	
ACCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGA	746 (0.097926%)	
ACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTT	11 (0.001444%)	
ACGGCTACACCCAAAATTATATCTTAATCCAACATCGAGG	46 (0.006038%)	
ACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAA	10 (0.001313%)	
ACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAA	13 (0.001706%)	
ACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAAATG	8 (0.001050%)	
AGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAA	17 (0.002232%)	
AGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAG	18 (0.002363%)	
AGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAAC	9 (0.001181%)	
AGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGCTA	11 (0.001444%)	
AGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGA	23 (0.003019%)	
AGAGATCGGAAGAGCACACG	3549 (0.232935%)	
AGAGCACACGTCTGAACTCC	19 (0.001247%)	
AGAGTTCATATCGATAAAAAAGATTGCGACCTCGATGTTG	19 (0.002494%)	
AGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATT	13 (0.001706%)	
AGATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGCA	12 (0.001575%)	
AGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAAT	38 (0.004988%)	
AGCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTTT	11 (0.001444%)	
AGCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTT	97 (0.012733%)	
AGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGAT	45 (0.005907%)	
AGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAA	100 (0.013127%)	
AGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATCGAT	8 (0.001050%)	
AGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAAT	14 (0.001838%)	
AGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAAAA	665 (0.087293%)	
AGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTT	139 (0.018246%)	
AGTCAAAATACTGCGGCCATTTAAAATTTTCAGTGGGCAG	6 (0.000788%)	
AGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATG	8 (0.001050%)	
AGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAA	7 (0.000919%)	
AGTTCATATCGATAAAAAAGATTGCGACCTCGATGTTGGA	29 (0.003807%)	
ATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAA	16 (0.002100%)	
ATAACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAA	23 (0.003019%)	
ATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCT	17 (0.002232%)	
ATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAAT	107 (0.014046%)	
ATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGT	18 (0.002363%)	
ATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCG	19 (0.002494%)	
ATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCG	84 (0.011026%)	
ATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTT		

	27 (0.003544%)
ATATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAG	8 (0.001050%)
ATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTAT	9 (0.001181%)
ATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATTTG	11 (0.001444%)
ATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGG	41 (0.005382%)
ATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGAT	78 (0.010239%)
ATCGGAAGAGCACACGTCTG	121 (0.007942%)
ATCGGAATTAACCAGACAAATCACTCCACGAACTAAGAAC	19 (0.002494%)
ATCTGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATC	17 (0.002232%)
ATGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAAT	11 (0.001444%)
ATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAA	17 (0.002232%)
ATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCACTT	9 (0.001181%)
ATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTT	9 (0.001181%)
ATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAG	12 (0.001575%)
ATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGAG	20 (0.002625%)
ATTAATAATGATTAAAAAATTAAGTTACTTTAGGGATAAC	90 (0.011814%)
ATTAATTAGGGGAGGAAAAGAAACTAACAAGGATTTTCTT	25 (0.003282%)
ATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAA	76 (0.009976%)
ATTAGAGTGCTTAAAGCAGGCTTCAAATGCCTGAATATTC	39 (0.005119%)
ATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGGACG	17 (0.002232%)
ATTCGATTATTTGCTACTACCACCAAGATCTGTACCAATG	9 (0.001181%)
ATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTATAT	16 (0.002100%)
ATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACATG	27 (0.003544%)
ATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGGT	28 (0.003675%)
ATTGAAGGCTGGAATGAATGGTTGGACGAAATATTAACTG	9 (0.001181%)
ATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGCATG	7 (0.000919%)
ATTGCAGTCCAGCACGGATACGACCTTAGAGGCGTTCAGG	10 (0.001313%)
ATTGCGACCTCGATGTTGGATTAAGATATAATTTTGGGTG	7 (0.000919%)
ATTGTGGGCCGGTACTATTACTTTGAACAAATTAGAGTGC	8 (0.001050%)
ATTTAGTTTTAGATGGAGTTTACCACCCACTTAGTGCTGC	10 (0.001313%)
ATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGC	145 (0.019034%)
ATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCTG	130 (0.017065%)
ATTTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAAT	13 (0.001706%)
ATTTTCTTAGTAGCGGCGAGCGAAAAGAAAACAGTTCAGC	6 (0.000788%)
ATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTA	377 (0.049488%)
ATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGACT	6 (0.000788%)
ATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGAC	79 (0.010370%)
CAAAAACATGTCTTTTTGAATTATATATAAAGTCTAACCT	378 (0.049619%)
CAAAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTT	

	65 (0.008532%)
CAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAA	13 (0.001706%)
CAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGG	16 (0.002100%)
CAAATTAGAGTGCTTAAAGCAGGCTTCAAATGCCTGAATA	11 (0.001444%)
CAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGAT	14 (0.001838%)
CAATGGTATGCGTAGAAGTGTTTGGCGTAAGCCTGCATGG	434 (0.056970%)
CACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTGGG	35 (0.004594%)
CACCCACTTAGTGCTGCACTATCAAGCAACACGACTCTTT	12 (0.001575%)
CACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCA	11 (0.001444%)
CACTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTACT	6 (0.000788%)
CAGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAAT	11 (0.001444%)
CAGATCGGAAGAGCACACGT	2379 (0.156143%)
CAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGC	28 (0.003675%)
CAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGA	68 (0.008926%)
CAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCT	28 (0.003675%)
CAGTCCTCCAAGGTCTCATTCGATTATTTGCTACTACCAC	13 (0.001706%)
CATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATC	39 (0.005119%)
CATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGG	41 (0.005382%)
CATATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAA	18 (0.002363%)
CATGATCTGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTC	25 (0.003282%)
CATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCACT	42 (0.005513%)
CATTAATAATGATTAAAAAATTAAGTTACTTTAGGGATAA	354 (0.046469%)
CATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGGAC	26 (0.003413%)
CATTCGATTATTTGCTACTACCACCAAGATCTGTACCAAT	9 (0.001181%)
CCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGATC	13 (0.001706%)
CCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGC	6 (0.000788%)
CCACTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTAC	390 (0.051194%)
CCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTTTAG	8 (0.001050%)
CCCAAACTGCTTCTATTAATCATTACCTCTTGATCTGAAAACCAATGAAAGCAGAACAGAGGTCTTATTTCATT	269 (0.065325%)
CCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTG	10 (0.001313%)
CCCCAAACTGCTTCTATTAATCATTACCTCTTGATCTGAA	287 (0.037674%)
CCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTAT	16 (0.002100%)
CCTCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAG	14 (0.001838%)
CCTCGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGT	83 (0.010895%)
CCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGAC	7 (0.000919%)
CCTGTTTAACAAAAACATGTCTTTTTGAATTATATATAAA	8 (0.001050%)
CCTTATTTATCATTGCAGTCCAGCACGGATACGACCTTAG	342 (0.044894%)
CCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTC	117 (0.015358%)
CGACCTCGATGTTGGATTAAGATATAATTTTGGGTGTAGC	

	9 (0.001181%)
CGAGATCGGAAGAGCACACG	2038 (0.133762%)
CGAGTGTTATTGTGGGCCGGTACTATTACTTTGAACAAAT	6 (0.000788%)
CGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATAT	222 (0.029141%)
CGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGTTCA	63 (0.008270%)
CGATTATTTGCTACTACCACCAAGATCTGTACCAATGGCA	9 (0.001181%)
CGCAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGT	16 (0.002100%)
CGCCTGTTTAACAAAAACATGTCTTTTTGAATTATATATA	43 (0.005645%)
CGCCTTCGAACCTCTAACTTTCGTTCTTGATTAATGAAAA	8 (0.001050%)
CGGAAGAGCACACGTCTGAA	51 (0.003347%)
CGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTATA	44 (0.005776%)
CGGCTACACCCAAAATTATATCTTAATCCAACATCGAGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAA	277 (0.067268%)
CGGTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAG	8 (0.001050%)
CGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTG	86 (0.011289%)
CGTCCAACCATTCATTCCAGCCTTCAATTAAAAGACTAAT	499 (0.065503%)
CGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAA	56 (0.007351%)
CGTTATCGGAATTAACCAGACAAATCACTCCACGAACTAA	32 (0.004201%)
CGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACA	14 (0.001838%)
CGTTCGTTATCGGAATTAACCAGACAAATCACTCCACGAA	459 (0.060252%)
CGTTTATGGTTAGAACTAGGGCGGTATCTGATCGCCTTCG	451 (0.059202%)
CTACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATT	155 (0.020346%)
CTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTC	33 (0.004332%)
CTCAGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAA	125 (0.016408%)
CTCATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCA	277 (0.036361%)
CTCATTCGATTATTTGCTACTACCACCAAGATCTGTACCA	22 (0.002888%)
CTCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGA	84 (0.011026%)
CTCCACGAACTAAGAACGGCCATGCACCACCACCCATAGA	6 (0.000788%)
CTCGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGTT	56 (0.007351%)
CTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAAT	354 (0.046469%)
CTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAA	57 (0.007482%)
CTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACT	7 (0.000919%)
CTGGAATGAATGGTTGGACGAAATATTAACTGTTTCATTT	40 (0.005251%)
CTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAG	7 (0.000919%)
CTGTTTAACAAAAACATGTCTTTTTGAATTATATATAAAG	9 (0.001181%)
CTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGGTTGG	28 (0.003675%)
CTTATTTATCATTGCAGTCCAGCACGGATACGACCTTAGA	111 (0.014571%)
CTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTACTAC	18 (0.002363%)
CTTCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAA	143 (0.018771%)
CTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATAT	

	32 (0.004201%)
CTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAAATGC	41 (0.005382%)
CTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCA	68 (0.008926%)
CTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAAAT	55 (0.007220%)
CTTTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAA	181 (0.023759%)
CTTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAATAT	19 (0.002494%)
CTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAAAT	13 (0.001706%)
GAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGG	127 (0.016671%)
GAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAAG	6 (0.000788%)
GAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGA	11 (0.001444%)
GAAGAGCACACGTCTGAACT	273 (0.017918%)
GAAGAGCACACGTCTGAACTCCAGTCACTGACCAATCTCG	425 (0.055789%)
GAATGGTTGGACGAAATATTAACTGTTTCATTTAAAATTT	11 (0.001444%)
GAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACA	19 (0.002494%)
GACAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGT	18 (0.002363%)
GACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGA	6 (0.000788%)
GAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAA	20 (0.002625%)
GAGATCGGAAGAGCACACGT	3262 (0.214098%)
GATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATA	24 (0.003150%)
GATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATTT	11 (0.001444%)
GATCGGAAGAGCACACGTCT	141 (0.009254%)
GATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATT	12 (0.001575%)
GATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAA	9 (0.001181%)
GATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGCAT	10 (0.001313%)
GCAAAAATAATATTCGCCTGTTTAACAAAAACATGTCTTT	11 (0.001444%)
GCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTG	8 (0.001050%)
GCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTGG	17 (0.002232%)
GCAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTC	9 (0.001181%)
GCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATG	10 (0.001313%)
GCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTTTA	9 (0.001181%)
GCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTATATA	7 (0.000919%)
GCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGT	14 (0.001838%)
GCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTA	28 (0.003675%)
GCCTGTTTAACAAAAACATGTCTTTTTGAATTATATATAA	7 (0.000919%)
GCGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTAT	8 (0.001050%)
GCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATT	19 (0.002494%)
GCTACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAAT	216 (0.028354%)
GCTGGAATGAATGGTTGGACGAAATATTAACTGTTTCATT	12 (0.001575%)
GCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAAA	

	12 (0.001575%)
GGAAGAGCACACGTCTGAAC	30 (0.001969%)
GGAATGAATGGTTGGACGAAATATTAACTGTTTCATTTAA	11 (0.001444%)
GGAGAGTTCATATCGATAAAAAAGATTGCGACCTCGATGT	7 (0.000919%)
GGATAACAGCGTAATTTTTTTGGAGAGTTCATATCGATAA	31 (0.004069%)
GGATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTA	8 (0.001050%)
GGATTTTCTTAGTAGCGGCGAGCGAAAAGAAAACAGTTCA	9 (0.001181%)
GGCAAAAATAATATTCGCCTGTTTAACAAAAACATGTCTT	16 (0.002100%)
GGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTATAT	25 (0.003282%)
GGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATCATT	11 (0.001444%)
GGCCGGTACTATTACTTTGAACAAATTAGAGTGCTTAAAG	6 (0.000788%)
GGCGGTATCTGATCGCCTTCGAACCTCTAACTTTCGTTCT	28 (0.003675%)
GGCTACACCCAAAATTATATCTTAATCCAACATCGAGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAAA	42 (0.010200%)
GGGATAACAGCGTAATTTTTTTGGAGAGTTCATATCGATA	41 (0.005382%)
GGGCCGGTACTATTACTTTGAACAAATTAGAGTGCTTAAA	27 (0.003544%)
GGTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGG	7 (0.000919%)
GGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATG	9 (0.001181%)
GGTTGGACGAAATATTAACTGTTTCATTTAAAATTTTTAT	11 (0.001444%)
GTAAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGG	18 (0.002363%)
GTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGATAT	8 (0.001050%)
GTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGC	149 (0.019559%)
GTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGC	15 (0.001969%)
GTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGA	13 (0.001706%)
GTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTT	82 (0.010764%)
GTCAAAATACTGCGGCCATTTAAAATTTTCAGTGGGCAGG	7 (0.000919%)
GTCCAACCATTCATTCCAGCCTTCAATTAAAAGACTAATGATTATGCTACCTTTGCACAGTCAAAATACTGCGG	515 (0.125065%)
GTCCTCCAAGGTCTCATTCGATTATTTGCTACTACCACCA	24 (0.003150%)
GTCCTTTCGTACTAAAATATCATAATTTTTTAAAGATAGAAACCAACCTGGCTTACACCGGTTTGAACTCAGAT	862 (0.209333%)
GTCTCATTCGATTATTTGCTACTACCACCAAGATCTGTAC	32 (0.004201%)
GTCTTCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAA	482 (0.063271%)
GTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAA	10 (0.001313%)
GTCTTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAAT	38 (0.004988%)
GTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGC	7 (0.000919%)
GTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATGGGT	18 (0.002363%)
GTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGAT	6 (0.000788%)
GTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATGG	6 (0.000788%)
GTGTTATTGTGGGCCGGTACTATTACTTTGAACAAATTAG	14 (0.001838%)
GTTACTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTC	35 (0.004594%)
GTTAGAACTAGGGCGGTATCTGATCGCCTTCGAACCTCTA	

	6 (0.000788%)	
GTTATATTTAGTTTTAGATGGAGTTTACCACCCACTTAGT	82 (0.010764%)	
GTTATCGGAATTAACCAGACAAATCACTCCACGAACTAAG	10 (0.001313%)	
GTTATTGTGGGCCGGTACTATTACTTTGAACAAATTAGAG	16 (0.002100%)	
GTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAA	71 (0.009320%)	
GTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACAT	41 (0.005382%)	
GTTCATATCGATAAAAAAGATTGCGACCTCGATGTTGGAT	119 (0.015621%)	
GTTCGTTATCGGAATTAACCAGACAAATCACTCCACGAAC	95 (0.012470%)	
GTTGGACGAAATATTAACTGTTTCATTTAAAATTTTTATA	8 (0.001050%)	
GTTGGATTAAGATATAATTTTGGGTGTAGCCGTTCAAATT	23 (0.003019%)	
GTTTAACAAAAACATGTCTTTTTGAATTATATATAAAGTC	44 (0.005776%)	
GTTTATGGTTAGAACTAGGGCGGTATCTGATCGCCTTCGA	27 (0.003544%)	
GTTTGAACTCAGATCATGTAAGAATTTAAAAGTCGAACAG	368 (0.048307%)	
TAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAAT	11 (0.001444%)	
TAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTT	52 (0.006826%)	
TAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAA	14 (0.001838%)	
TAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCA	23 (0.003019%)	
TAACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAA	101 (0.013258%)	
TAAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGC	35 (0.004594%)	
TAAGTCTGTTCGACTTTTAAATTCTTACATGATCTGAGTT	7 (0.000919%)	
TAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTA	30 (0.003938%)	
TAATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAG	8 (0.001050%)	
TAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATT	8 (0.001050%)	
TAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTT	25 (0.003282%)	
TAATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGT	52 (0.006826%)	
TAATGATTATGCTACCTTTGCACAGTCAAAATACTGCGGC	747 (0.098057%)	
TAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGA	10 (0.001313%)	
TAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCG	29 (0.003807%)	
TACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTT	83 (0.010895%)	
TAGATCGGAAGAGCACACGT	3520 (0.231031%)	
TAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAA	9 (0.001181%)	
TAGCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCT	15 (0.001969%)	
TAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTA	17 (0.002232%)	
TAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATCGA	22 (0.002888%)	
TATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTC	7 (0.000919%)	
TATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGA	23 (0.003019%)	
TATTAATTAGGGGAGGAAAAGAAACTAACAAGGATTTTCT	374 (0.049094%)	
TATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTT	14 (0.001838%)	
TCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAA		

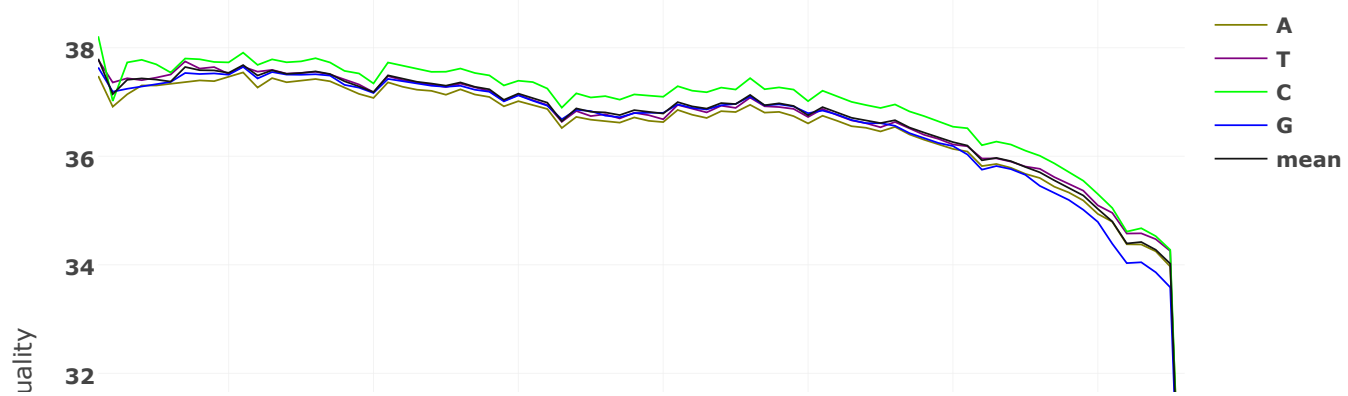
	10 (0.001313%)
TCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGA	7 (0.000919%)
TCATATCGATAAAAAAGATTGCGACCTCGATGTTGGATTA	7 (0.000919%)
TCATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCAC	6 (0.000788%)
TCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGGA	6 (0.000788%)
TCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGAT	6 (0.000788%)
TCCTTTCGTACTAAAATATCATAATTTTTTAAAGATAGAAACCAACCTGGCTTACACCGGTTTGAACTCAGATC	34 (0.008257%)
TCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATA	10 (0.001313%)
TCGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGTTC	9 (0.001181%)
TCGCCTTCGAACCTCTAACTTTCGTTCTTGATTAATGAAA	14 (0.001838%)
TCGGAAGAGCACACGTCTGA	30 (0.001969%)
TCGGAATTAACCAGACAAATCACTCCACGAACTAAGAACG	7 (0.000919%)
TCGTTATCGGAATTAACCAGACAAATCACTCCACGAACTA	6 (0.000788%)
TCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAA	6 (0.000788%)
TGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAG	190 (0.024941%)
TGAACTCAGATCATGTAAGAATTTAAAAGTCGAACAGACT	9 (0.001181%)
TGAAGGCTGGAATGAATGGTTGGACGAAATATTAACTGTT	12 (0.001575%)
TGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAATT	6 (0.000788%)
TGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTG	60 (0.007876%)
TGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTT	165 (0.021659%)
TGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAAT	22 (0.002888%)
TGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCT	27 (0.003544%)
TGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTG	10 (0.001313%)
TGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTG	51 (0.006695%)
TGCGACCTCGATGTTGGATTAAGATATAATTTTGGGTGTA	16 (0.002100%)
TGCGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTA	10 (0.001313%)
TGGAATGAATGGTTGGACGAAATATTAACTGTTTCATTTA	14 (0.001838%)
TGGAGAGTTCATATCGATAAAAAAGATTGCGACCTCGATG	10 (0.001313%)
TGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATCAT	11 (0.001444%)
TGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGACTTTTA	7 (0.000919%)
TGGTTATATTTAGTTTTAGATGGAGTTTACCACCCACTTA	10 (0.001313%)
TGTAAGACAGATTGATAGCTCTTTCTCGAATCTATGGGTG	6 (0.000788%)
TTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTT	6 (0.000788%)
TTAAACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAA	358 (0.046994%)
TTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCC	17 (0.002232%)
TTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGT	25 (0.003282%)
TTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGAGA	9 (0.001181%)
TTAATAATGATTAAAAAATTAAGTTACTTTAGGGATAACA	12 (0.001575%)
TTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATCG	

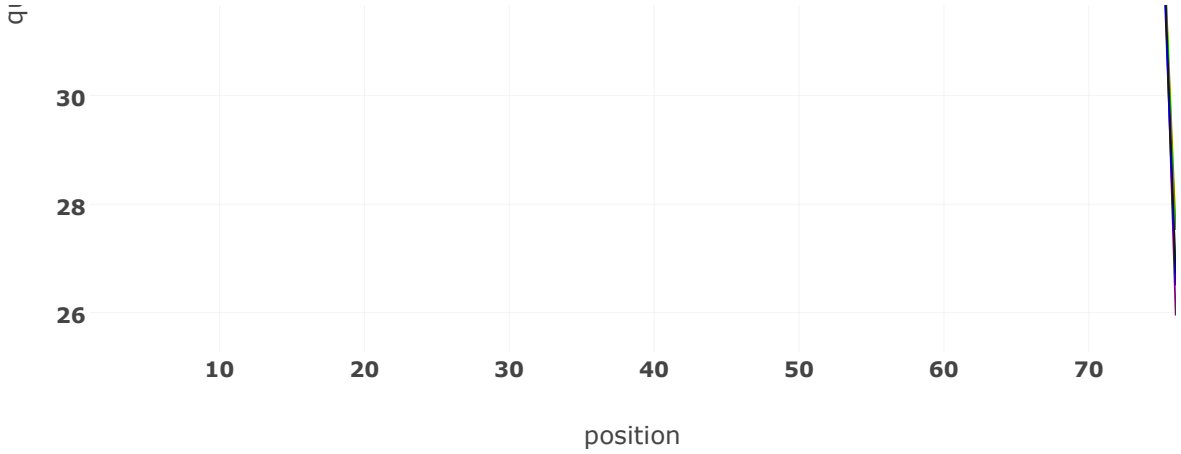
	7 (0.000919%)
TTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAA	18 (0.002363%)
TTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACATG	8 (0.001050%)
TTCATATCGATAAAAAAGATTGCGACCTCGATGTTGGATT	16 (0.002100%)
TTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTATATA	11 (0.001444%)
TTCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAA	14 (0.001838%)
TTGAACTCAGATCATGTAAGAATTTAAAAGTCGAACAGAC	6 (0.000788%)
TTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGT	6 (0.000788%)
TTGCGACCTCGATGTTGGATTAAGATATAATTTTGGGTGT	7 (0.000919%)
TTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCAT	30 (0.003938%)
TTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGC	19 (0.002494%)
TTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCTGAG	6 (0.000788%)
TTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTT	22 (0.002888%)
TTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATC	17 (0.002232%)
TTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAAT	15 (0.001969%)
TTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAAATT	7 (0.000919%)
TTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCA	28 (0.003675%)
TTTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAG	23 (0.003019%)
TTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCTGA	18 (0.002363%)
TTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAATATT	13 (0.001706%)
TTTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATT	13 (0.001706%)
TTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAA	20 (0.002625%)
TTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACCTC	21 (0.002757%)
TTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACCT	8 (0.001050%)
TTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACC	24 (0.003150%)

After filtering

After filtering: read1: quality

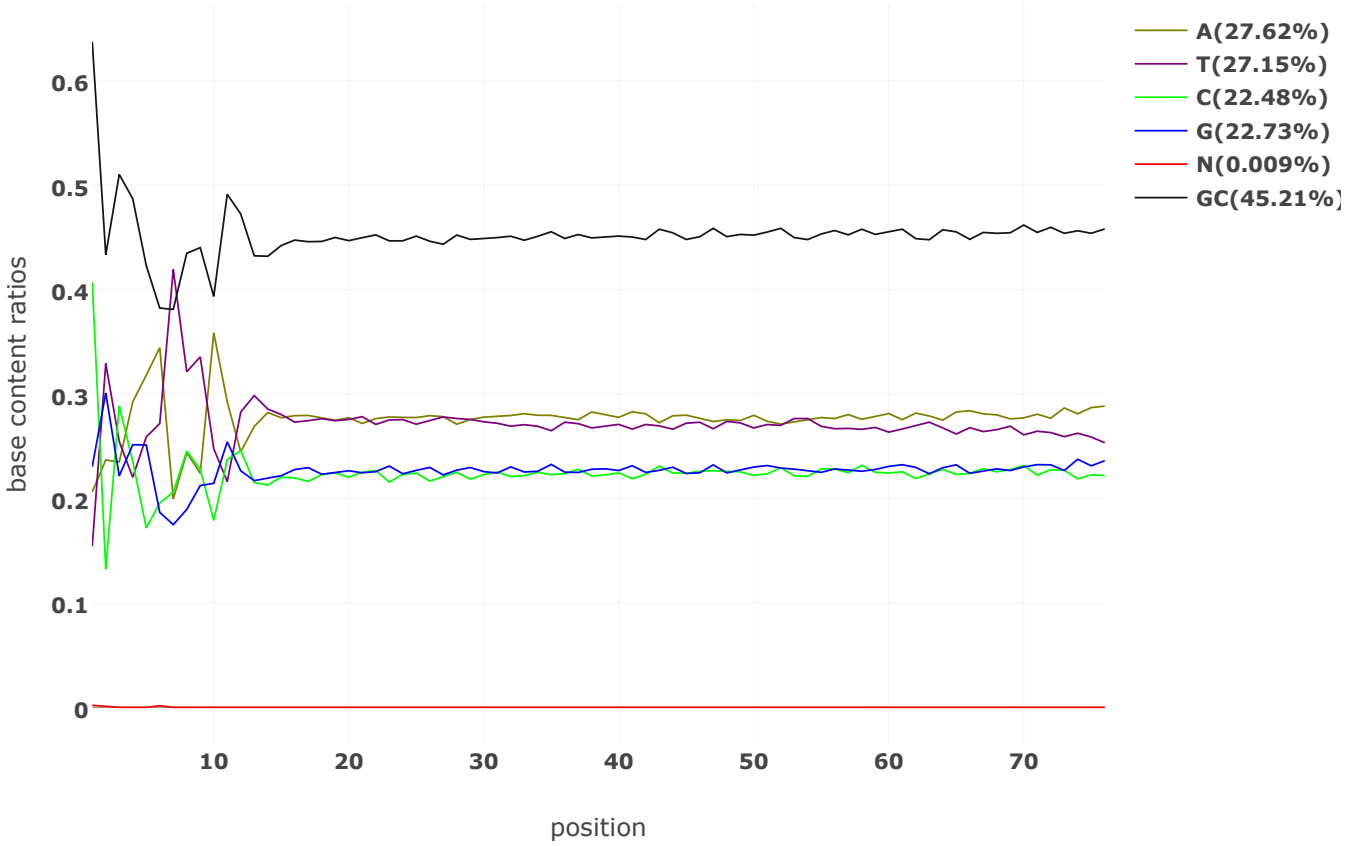
Value of each position will be shown on mouse over.





After filtering: read1: base contents

Value of each position will be shown on mouse over.



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
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	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	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	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: read1: overrepresented sequences

Sampling rate: 1 / 20

overrepresented sequence	count (% of bases)	distribution: cycle 1 ~ cycle 76
AAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAATT	143 (0.019759%)	
AAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTT	199 (0.027497%)	
AAAAACATGTCTTTTTGAATTATATATAAAGTCTAACCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTG	370 (0.094580%)	
AAAAAGATTGCGACCTCGATGTTGGATTAAGATATAATTT	28 (0.003869%)	
AAAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTT	28 (0.003869%)	
AAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTT	34 (0.004698%)	
AAAAGATTGCGACCTCGATGTTGGATTAAGATATAATTTT	55 (0.007600%)	
AAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTG	13 (0.001796%)	
AAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTG	21 (0.002902%)	
AAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGT	25 (0.003454%)	
AAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAAT	17 (0.002349%)	
AAACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAACA	14 (0.001934%)	
AAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAAGA	11 (0.001520%)	
AAAGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAA	163 (0.022522%)	
AAAGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAA	469 (0.064803%)	
AAAGATTGCGACCTCGATGTTGGATTAAGATATAATTTTG	30 (0.004145%)	
AAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGA	9 (0.001244%)	
AAATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGA	109 (0.015061%)	
AAATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGG	41 (0.005665%)	
AAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAG	30 (0.004145%)	
AAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTA	20 (0.002763%)	

AAATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATC	7 (0.000967%)	
AACAAAAACATGTCTTTTTGAATTATATATAAAGTCTAAC	8 (0.001105%)	
AACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAA	78 (0.010778%)	
AACATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAA	458 (0.063284%)	
AACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATT	38 (0.005251%)	
AACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAACAA	28 (0.003869%)	
AACGGCTACACCCAAAATTATATCTTAATCCAACATCGAG	330 (0.045597%)	
AAGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAA	52 (0.007185%)	
AAGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAA	85 (0.011745%)	
AAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGCT	34 (0.004698%)	
AAGACAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTG	45 (0.006218%)	
AAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAG	16 (0.002211%)	
AAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCT	12 (0.001658%)	
AAGATTGCGACCTCGATGTTGGATTAAGATATAATTTTGG	20 (0.002763%)	
AAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTT	29 (0.004007%)	
AAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAA	21 (0.002902%)	
AATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAGC	7 (0.000967%)	
AATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTA	6 (0.000829%)	
AATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTG	39 (0.005389%)	
AATGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAA	10 (0.001382%)	
AATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTA	41 (0.005665%)	
AATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATC	12 (0.001658%)	
AATGGTTGGACGAAATATTAACTGTTTCATTTAAAATTTT	6 (0.000829%)	
AATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGA	68 (0.009396%)	
AATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACAT	19 (0.002625%)	
AATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGG	28 (0.003869%)	
AATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAG	11 (0.001520%)	
AATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCT	34 (0.004698%)	
AATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGAC	13 (0.001796%)	
AATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGA	55 (0.007600%)	
ACAAATTAGAGTGCTTAAAGCAGGCTTCAAATGCCTGAAT	8 (0.001105%)	
ACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAG	8 (0.001105%)	
ACATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAAT	9 (0.001244%)	
ACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTA	11 (0.001520%)	
ACCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGA	754 (0.104183%)	
ACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTT	10 (0.001382%)	
ACGGCTACACCCAAAATTATATCTTAATCCAACATCGAGG	43 (0.005941%)	
ACTCAGATCATGTAAGAATTTAAAAGTCGAACAGACTTAA	6 (0.000829%)	
ACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAA		

	16 (0.002211%)
ACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAA	17 (0.002349%)
AGAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAA	20 (0.002763%)
AGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAG	23 (0.003178%)
AGAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAAC	8 (0.001105%)
AGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGCTA	11 (0.001520%)
AGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGA	16 (0.002211%)
AGAGTTCATATCGATAAAAAAGATTGCGACCTCGATGTTG	25 (0.003454%)
AGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATT	17 (0.002349%)
AGATTGCGACCTCGATGTTGGATTAAGATATAATTTTGGG	7 (0.000967%)
AGCACGGATACGACCTTAGAGGCGTTCAGGCATAATCCAA	8 (0.001105%)
AGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAAT	37 (0.005112%)
AGCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTTT	6 (0.000829%)
AGCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTT	101 (0.013956%)
AGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGAT	42 (0.005803%)
AGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAA	86 (0.011883%)
AGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATCGAT	6 (0.000829%)
AGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAAT	10 (0.001382%)
AGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAAAA	618 (0.085391%)
AGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTT	158 (0.021831%)
AGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATG	9 (0.001244%)
AGTTACTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTT	7 (0.000967%)
AGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAA	11 (0.001520%)
AGTTCATATCGATAAAAAAGATTGCGACCTCGATGTTGGA	29 (0.004007%)
ATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAA	21 (0.002902%)
ATAAATTTTAGCTTTTTGACTAAAAAATAAAATTCTATAA	7 (0.000967%)
ATAACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAA	19 (0.002625%)
ATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCT	16 (0.002211%)
ATAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAAT	87 (0.012021%)
ATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGT	24 (0.003316%)
ATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCG	19 (0.002625%)
ATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCG	101 (0.013956%)
ATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTT	28 (0.003869%)
ATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTAT	16 (0.002211%)
ATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATTTG	21 (0.002902%)
ATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGG	39 (0.005389%)
ATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGAT	115 (0.015890%)
ATCGGAATTAACCAGACAAATCACTCCACGAACTAAGAAC	16 (0.002211%)
ATCTGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATC	

	20 (0.002763%)	
ATGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAAT	10 (0.001382%)	
ATGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAA	21 (0.002902%)	
ATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATCA	9 (0.001244%)	
ATGGTATGCGTAGAAGTGTTTGGCGTAAGCCTGCATGGAG	12 (0.001658%)	
ATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTT	10 (0.001382%)	
ATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAG	14 (0.001934%)	
ATTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGAG	19 (0.002625%)	
ATTAATAATGATTAAAAAATTAAGTTACTTTAGGGATAAC	96 (0.013265%)	
ATTAATTAGGGGAGGAAAAGAAACTAACAAGGATTTTCTT	23 (0.003178%)	
ATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAA	93 (0.012850%)	
ATTAGAGTGCTTAAAGCAGGCTTCAAATGCCTGAATATTC	38 (0.005251%)	
ATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGGACG	15 (0.002073%)	
ATTCGATTATTTGCTACTACCACCAAGATCTGTACCAATG	14 (0.001934%)	
ATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTATAT	17 (0.002349%)	
ATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACATG	36 (0.004974%)	
ATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGGT	26 (0.003593%)	
ATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGCATG	7 (0.000967%)	
ATTGCAGTCCAGCACGGATACGACCTTAGAGGCGTTCAGG	11 (0.001520%)	
ATTGCGACCTCGATGTTGGATTAAGATATAATTTTGGGTG	8 (0.001105%)	
ATTGTGGGCCGGTACTATTACTTTGAACAAATTAGAGTGC	8 (0.001105%)	
ATTTAGTTTTAGATGGAGTTTACCACCCACTTAGTGCTGC	16 (0.002211%)	
ATTTATCATTGCAGTCCAGCACGGATACGACCTTAGAGGC	9 (0.001244%)	
ATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGC	137 (0.018930%)	
ATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCTG	133 (0.018377%)	
ATTTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAAT	7 (0.000967%)	
ATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTA	372 (0.051401%)	
ATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTCGACT	13 (0.001796%)	
ATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGAC	85 (0.011745%)	
CAAAAACATGTCTTTTTGAATTATATATAAAGTCTAACCT	344 (0.047532%)	
CAAAAATAATATTCGCCTGTTTAACAAAAACATGTCTTTT	59 (0.008152%)	
CAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAA	16 (0.002211%)	
CAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGG	13 (0.001796%)	
CAAATTAGAGTGCTTAAAGCAGGCTTCAAATGCCTGAATA	6 (0.000829%)	
CAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACATGAT	17 (0.002349%)	
CAAGGATTTTCTTAGTAGCGGCGAGCGAAAAGAAAACAGT	7 (0.000967%)	
CAAGGTCTCATTCGATTATTTGCTACTACCACCAAGATCT	9 (0.001244%)	
CAATGGTATGCGTAGAAGTGTTTGGCGTAAGCCTGCATGG	409 (0.056513%)	
CACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTGGG		

	25 (0.003454%)
CACCCACTTAGTGCTGCACTATCAAGCAACACGACTCTTT	7 (0.000967%)
CACGGATACGACCTTAGAGGCGTTCAGGCATAATCCAACG	7 (0.000967%)
CACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCA	15 (0.002073%)
CACTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTACT	12 (0.001658%)
CAGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAAT	17 (0.002349%)
CAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGTGC	34 (0.004698%)
CAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGA	69 (0.009534%)
CAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCT	19 (0.002625%)
CAGTCCTCCAAGGTCTCATTCGATTATTTGCTACTACCAC	8 (0.001105%)
CATAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATC	28 (0.003869%)
CATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGG	39 (0.005389%)
CATATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAA	13 (0.001796%)
CATGATCTGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTC	19 (0.002625%)
CATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCACT	58 (0.008014%)
CATTAATAATGATTAAAAAATTAAGTTACTTTAGGGATAA	349 (0.048223%)
CATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTTGGAC	24 (0.003316%)
CCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGATC	11 (0.001520%)
CCACTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTAC	376 (0.051953%)
CCCAAACTGCTTCTATTAATCATTACCTCTTGATCTGAAAACCAATGAAAGCAGAACAGAGGTCTTATTTCATT	250 (0.063905%)
CCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTG	7 (0.000967%)
CCCCAAACTGCTTCTATTAATCATTACCTCTTGATCTGAA	296 (0.040899%)
CCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTAT	14 (0.001934%)
CCTCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAG	16 (0.002211%)
CCTCGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGT	87 (0.012021%)
CCTGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGAC	7 (0.000967%)
CCTTATTTATCATTGCAGTCCAGCACGGATACGACCTTAG	328 (0.045321%)
CCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTC	142 (0.019621%)
CGACCTCGATGTTGGATTAAGATATAATTTTGGGTGTAGC	12 (0.001658%)
CGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATAT	195 (0.026944%)
CGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGTTCA	69 (0.009534%)
CGATTATTTGCTACTACCACCAAGATCTGTACCAATGGCA	7 (0.000967%)
CGCAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGT	13 (0.001796%)
CGCCTGTTTAACAAAAACATGTCTTTTTGAATTATATATA	39 (0.005389%)
CGCCTTCGAACCTCTAACTTTCGTTCTTGATTAATGAAAA	12 (0.001658%)
CGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTATA	47 (0.006494%)
CGGCTACACCCAAAATTATATCTTAATCCAACATCGAGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAA	274 (0.070040%)
CGGTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAG	6 (0.000829%)
CGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTG	

	96 (0.013265%)
CGTCCAACCATTCATTCCAGCCTTCAATTAAAAGACTAAT	474 (0.065494%)
CGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAA	38 (0.005251%)
CGTTATCGGAATTAACCAGACAAATCACTCCACGAACTAA	37 (0.005112%)
CGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACA	10 (0.001382%)
CGTTCGTTATCGGAATTAACCAGACAAATCACTCCACGAA	426 (0.058862%)
CGTTTATGGTTAGAACTAGGGCGGTATCTGATCGCCTTCG	421 (0.058171%)
CTACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATT	173 (0.023904%)
CTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTC	41 (0.005665%)
CTCAGATCATGTAAGAATTTAAAAGTCGAACAGACTTAAA	109 (0.015061%)
CTCATGGTTATATTTAGTTTTAGATGGAGTTTACCACCCA	245 (0.033853%)
CTCATTCGATTATTTGCTACTACCACCAAGATCTGTACCA	17 (0.002349%)
CTCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGA	80 (0.011054%)
CTCGATGTTGGATTAAGATATAATTTTGGGTGTAGCCGTT	71 (0.009810%)
CTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAAT	327 (0.045183%)
CTGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAA	54 (0.007461%)
CTGGAATGAATGGTTGGACGAAATATTAACTGTTTCATTT	51 (0.007047%)
CTGTTTAACAAAAACATGTCTTTTTGAATTATATATAAAG	6 (0.000829%)
CTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGGTTGG	38 (0.005251%)
CTTATTTATCATTGCAGTCCAGCACGGATACGACCTTAGA	113 (0.015614%)
CTTCAGTCCTCCAAGGTCTCATTCGATTATTTGCTACTAC	9 (0.001244%)
CTTCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAAAA	141 (0.019482%)
CTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATAT	18 (0.002487%)
CTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAAATGC	59 (0.008152%)
CTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCA	79 (0.010916%)
CTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAAAT	46 (0.006356%)
CTTTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAA	159 (0.021970%)
CTTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAATAT	25 (0.003454%)
CTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAAAT	17 (0.002349%)
GAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGG	135 (0.018653%)
GAAACTAACAAGGATTTTCTTAGTAGCGGCGAGCGAAAAG	7 (0.000967%)
GAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGA	12 (0.001658%)
GAAGAGCACACGTCTGAACT	310 (0.021417%)
GAAGAGCACACGTCTGAACTCCAGTCACTGACCAATCTCG	290 (0.040070%)
GAATGAATGGTTGGACGAAATATTAACTGTTTCATTTAAA	6 (0.000829%)
GAATGGTTGGACGAAATATTAACTGTTTCATTTAAAATTT	11 (0.001520%)
GAATTCGGCAAAAATAATATTCGCCTGTTTAACAAAAACA	19 (0.002625%)
GACAGATTGATAGCTCTTTCTCGAATCTATGGGTGGTGGT	21 (0.002902%)
GACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGA	

	8 (0.001105%)
GAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAAGAGAA	13 (0.001796%)
GAGAGTTCATATCGATAAAAAAGATTGCGACCTCGATGTT	8 (0.001105%)
GAGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTA	8 (0.001105%)
GATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATA	19 (0.002625%)
GATCATGTAAGAATTTAAAAGTCGAACAGACTTAAAATTT	15 (0.002073%)
GATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATT	13 (0.001796%)
GATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAA	9 (0.001244%)
GCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTGG	28 (0.003869%)
GCAGTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTC	9 (0.001244%)
GCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATG	11 (0.001520%)
GCCAGGTTGGTTTCTATCTTTAAAAAATTATGATATTTTA	12 (0.001658%)
GCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTGT	10 (0.001382%)
GCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTA	25 (0.003454%)
GCCTGTTTAACAAAAACATGTCTTTTTGAATTATATATAA	11 (0.001520%)
GCGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTAT	7 (0.000967%)
GCGTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATT	20 (0.002763%)
GCTACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAAT	178 (0.024595%)
GCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAAA	7 (0.000967%)
GGAATGAATGGTTGGACGAAATATTAACTGTTTCATTTAA	6 (0.000829%)
GGAGAGTTCATATCGATAAAAAAGATTGCGACCTCGATGT	11 (0.001520%)
GGATAACAGCGTAATTTTTTTTGGAGAGTTCATATCGATAA	32 (0.004422%)
GGATTTTCTTAGTAGCGGCGAGCGAAAAGAAAACAGTTCA	14 (0.001934%)
GGCAAAAATAATATTCGCCTGTTTAACAAAAACATGTCTT	14 (0.001934%)
GGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTATAT	12 (0.001658%)
GGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATCATT	9 (0.001244%)
GGCCGGTACTATTACTTTGAACAAATTAGAGTGCTTAAAG	14 (0.001934%)
GGCGGTATCTGATCGCCTTCGAACCTCTAACTTTCGTTCT	25 (0.003454%)
GGCTACACCCAAAATTATATCTTAATCCAACATCGAGGTCGCAATCTTTTTTATCGATATGAACTCTCCAAAAA	39 (0.009969%)
GGGATAACAGCGTAATTTTTTTTGGAGAGTTCATATCGATA	32 (0.004422%)
GGGCCGGTACTATTACTTTGAACAAATTAGAGTGCTTAAA	34 (0.004698%)
GGTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGG	7 (0.000967%)
GGTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATG	7 (0.000967%)
GGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGA	7 (0.000967%)
GGTTGGACGAAATATTAACTGTTTCATTTAAAATTTTTAT	9 (0.001244%)
GTAAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGG	22 (0.003040%)
GTAATTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGC	163 (0.022522%)
GTACTATTACTTTGAACAAATTAGAGTGCTTAAAGCAGGC	13 (0.001796%)
GTAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGA	

	16 (0.002211%)	
GTAGCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTC	10 (0.001382%)	
GTATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTT	96 (0.013265%)	
GTCCAACCATTCATTCCAGCCTTCAATTAAAAGACTAATGATTATGCTACCTTTGCACAGTCAAAATACTGCGG	454 (0.116052%)	
GTCCTCCAAGGTCTCATTCGATTATTTGCTACTACCACCA	27 (0.003731%)	
GTCCTTTCGTACTAAAATATCATAATTTTTTAAAGATAGAAACCAACCTGGCTTACACCGGTTTGAACTCAGAT	884 (0.225969%)	
GTCTCATTCGATTATTTGCTACTACCACCAAGATCTGTAC	17 (0.002349%)	
GTCTTCTCGTCTTTTAAATAAATTTTAGCTTTTTGACTAA	471 (0.065080%)	
GTCTTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAA	17 (0.002349%)	
GTCTTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAAT	25 (0.003454%)	
GTGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGC	6 (0.000829%)	
GTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATGGGT	19 (0.002625%)	
GTGTAAGCCAGGTTGGTTTCTATCTTTAAAAAATTATGAT	8 (0.001105%)	
GTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTATGG	7 (0.000967%)	
GTGTTATTGTGGGCCGGTACTATTACTTTGAACAAATTAG	11 (0.001520%)	
GTTACTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTC	20 (0.002763%)	
GTTAGAACTAGGGCGGTATCTGATCGCCTTCGAACCTCTA	10 (0.001382%)	
GTTATATTTAGTTTTAGATGGAGTTTACCACCCACTTAGT	93 (0.012850%)	
GTTATTGTGGGCCGGTACTATTACTTTGAACAAATTAGAG	10 (0.001382%)	
GTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAA	90 (0.012436%)	
GTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCTTACAT	28 (0.003869%)	
GTTCATATCGATAAAAAAGATTGCGACCTCGATGTTGGAT	118 (0.016304%)	
GTTCGTTATCGGAATTAACCAGACAAATCACTCCACGAAC	86 (0.011883%)	
GTTGGACGAAATATTAACTGTTTCATTTAAAATTTTTATA	9 (0.001244%)	
GTTGGATTAAGATATAATTTTGGGTGTAGCCGTTCAAATT	33 (0.004560%)	
GTTTAACAAAAACATGTCTTTTTGAATTATATATAAAGTC	42 (0.005803%)	
GTTTATGGTTAGAACTAGGGCGGTATCTGATCGCCTTCGA	27 (0.003731%)	
GTTTGAACTCAGATCATGTAAGAATTTAAAAGTCGAACAG	381 (0.052644%)	
TAAAAAAGATTGCGACCTCGATGTTGGATTAAGATATAAT	6 (0.000829%)	
TAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTTT	60 (0.008290%)	
TAAACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAAC	8 (0.001105%)	
TAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAA	12 (0.001658%)	
TAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCA	38 (0.005251%)	
TAACAGCGTAATTTTTTTGGAGAGTTCATATCGATAAAAA	94 (0.012988%)	
TAAGAATTTAAAAGTCGAACAGACTTAAAATTTGAACGGC	43 (0.005941%)	
TAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTC	10 (0.001382%)	
TAAGTGTGTAAGACAGATTGATAGCTCTTTCTCGAATCTA	30 (0.004145%)	
TAATAATGATTAAAAAATTAAGTTACTTTAGGGATAACAG	8 (0.001105%)	
TAATATTCGCCTGTTTAACAAAAACATGTCTTTTTGAATT		

	11 (0.001520%)
TAATCATTAGTCTTTTAATTGAAGGCTGGAATGAATGGTT	20 (0.002763%)
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TACCTTTGCACAGTCAAAATACTGCGGCCATTTAAAATTT	63 (0.008705%)
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TACTTTGAACAAATTAGAGTGCTTAAAGCAGGCTTCAAAT	7 (0.000967%)
TAGCATAATCATTAGTCTTTTAATTGAAGGCTGGAATGAA	9 (0.001244%)
TAGCCGTTCAAATTTTAAGTCTGTTCGACTTTTAAATTCT	18 (0.002487%)
TAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTTA	35 (0.004836%)
TAGGGATAACAGCGTAATTTTTTTTGGAGAGTTCATATCGA	23 (0.003178%)
TATAATTTTGGGTGTAGCCGTTCAAATTTTAAGTCTGTTC	8 (0.001105%)
TATCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGA	23 (0.003178%)
TATTAATTAGGGGAGGAAAAGAAACTAACAAGGATTTTCT	356 (0.049190%)
TATTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTT	11 (0.001520%)
TCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAAA	8 (0.001105%)
TCATATCGATAAAAAAGATTGCGACCTCGATGTTGGATTA	6 (0.000829%)
TCCAAGGTCTCATTCGATTATTTGCTACTACCACCAAGAT	7 (0.000967%)
TCCTTTCGTACTAAAATATCATAATTTTTTAAAGATAGAAACCAACCTGGCTTACACCGGTTTGAACTCAGATC	25 (0.006391%)
TCGATAAAAAAGATTGCGACCTCGATGTTGGATTAAGATA	6 (0.000829%)
TCGCCTTCGAACCTCTAACTTTCGTTCTTGATTAATGAAA	12 (0.001658%)
TCGGAATTAACCAGACAAATCACTCCACGAACTAAGAACG	8 (0.001105%)
TCTCATTCGATTATTTGCTACTACCACCAAGATCTGTACC	8 (0.001105%)
TGAAAATTTTAAATGGCCGCAGTATTTTGACTGTGCAAAG	204 (0.028187%)
TGAAGGCTGGAATGAATGGTTGGACGAAATATTAACTGTT	10 (0.001382%)
TGAATGGTTGGACGAAATATTAACTGTTTCATTTAAAATT	6 (0.000829%)
TGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAATTG	72 (0.009949%)
TGAGTTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTT	155 (0.021417%)
TGATTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAAT	19 (0.002625%)
TGCAAAGGTAGCATAATCATTAGTCTTTTAATTGAAGGCT	33 (0.004560%)
TGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGTG	16 (0.002211%)
TGCCCACTGAAAATTTTAAATGGCCGCAGTATTTTGACTG	44 (0.006080%)
TGCGACCTCGATGTTGGATTAAGATATAATTTTGGGTGTA	10 (0.001382%)
TGCGGCCATTTAAAATTTTCAGTGGGCAGGTTAGACTTTA	12 (0.001658%)
TGGAATGAATGGTTGGACGAAATATTAACTGTTTCATTTA	12 (0.001658%)
TGGAGAGTTCATATCGATAAAAAAGATTGCGACCTCGATG	11 (0.001520%)
TGGATTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTT	

	7 (0.000967%)	
TGGCCGCAGTATTTTGACTGTGCAAAGGTAGCATAATCAT	22 (0.003040%)	
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TGTTTAACAAAAACATGTCTTTTTGAATTATATATAAAGT	8 (0.001105%)	
TTAAAAAATTAAGTTACTTTAGGGATAACAGCGTAATTTT	11 (0.001520%)	
TTAAACGAGTGTTATTGTGGGCCGGTACTATTACTTTGAA	336 (0.046426%)	
TTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGCC	15 (0.002073%)	
TTAAGATATAATTTTGGGTGTAGCCGTTCAAATTTTAAGT	21 (0.002902%)	
TTAAGTTACTTTAGGGATAACAGCGTAATTTTTTTGGAGA	7 (0.000967%)	
TTACTTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCA	6 (0.000829%)	
TTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTTT	10 (0.001382%)	
TTATTTATCATTGCAGTCCAGCACGGATACGACCTTAGAG	8 (0.001105%)	
TTCAAACCGGTGTAAGCCAGGTTGGTTTCTATCTTTAAAA	15 (0.002073%)	
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TTCGCCTGTTTAACAAAAACATGTCTTTTTGAATTATATA	10 (0.001382%)	
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TTCTTACATGATCTGAGTTCAAACCGGTGTAAGCCAGGTT	8 (0.001105%)	
TTGCACAGTCAAAATACTGCGGCCATTTAAAATTTTCAGT	6 (0.000829%)	
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TTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCAT	21 (0.002902%)	
TTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAGC	21 (0.002902%)	
TTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATTT	23 (0.003178%)	
TTTAGGGATAACAGCGTAATTTTTTTGGAGAGTTCATATC	11 (0.001520%)	
TTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAAT	25 (0.003454%)	
TTTTAAATAAATTTTAGCTTTTTGACTAAAAAATAAAATT	6 (0.000829%)	
TTTTAAATGGCCGCAGTATTTTGACTGTGCAAAGGTAGCA	40 (0.005527%)	
TTTTAAATTCTTACATGATCTGAGTTCAAACCGGTGTAAG	28 (0.003869%)	
TTTTAAGTCTGTTCGACTTTTAAATTCTTACATGATCTGA	12 (0.001658%)	
TTTTAATTGAAGGCTGGAATGAATGGTTGGACGAAATATT	13 (0.001796%)	
TTTTAGCTTTTTGACTAAAAAATAAAATTCTATAAAAATT	8 (0.001105%)	
TTTTGACTGTGCAAAGGTAGCATAATCATTAGTCTTTTAA	21 (0.002902%)	
TTTTTGACTAAAAAATAAAATTCTATAAAAATTTTAAATG	8 (0.001105%)	
TTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACCTC	17 (0.002349%)	
TTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACCT	7 (0.000967%)	
TTTTTTTGGAGAGTTCATATCGATAAAAAAGATTGCGACC	16 (0.002211%)	

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