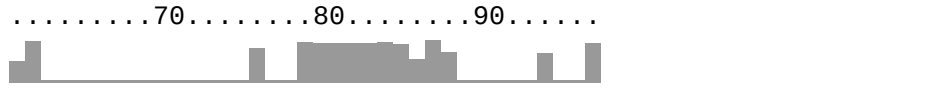
```
                                ((..(((((..((((.........)))).(((((.......)))))....(((((.....
chr-1.trna23-Glu-TTC        GU--CCCUUUCGUCCAG-UGGUUAGGACAUCGUCUUUUCAUGUCGAAGACACGGGUUCGA 57
chr-15.trna2-Glu-TTC        GU--CCCUUUCGUCCAG-UGGUUAGAACAUCGUCUUUUCAUGUCGAAGACACGGGUUCGA 57
chr-6.trna15-Glu-CTC        UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-16.trna39-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna9-Glu-CTC        UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna10-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-21.trna34-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna11-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-20.trna81-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna12-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna55-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-17.trna56-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-19.trna62-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-19.trna67-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-5.trna14-Glu-CTC        UC--CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 58
chr-19.trna80-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGUGUUCAA 58
chr-19.trna81-Glu-CTC       UC--CGUUGUAGUCUAGGUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGUGUUCAA 58
chr-13.trna47-Glu-CTC       UU--CGUUGUAGUCUAGGUGGUUAGGAUACUUGGCUCUCACACGAGAGAUCCGGGUUCAA 58
chr-18.trna13-Glu-CTC       CC--UGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACUCGGGUUUAA 58
chr-10.trna57-Glu-CTC       UC--CGUUGUAGUCUAGGGGGUUAGGAUACUAAGCUCUCACUUGAGAGACCCGGAUUCAA 58
chr-18.trna26-Glu-CTC       AACCCGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 60
chr-1.trna40-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAG 57
chr-9.trna41-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-10.trna45-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-10.trna80-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-26.trna8-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-19.trna100-Glu-TTC      UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-22.trna53-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-26.trna2-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-16.trna1-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-23.trna1-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-20.trna23-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUACUUGGCUUUCACCCAAGAGACCCGGGUUCAA 57
chr-21.trna47-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGAGUUCAA 57
chr-2.trna3-Glu-TTC         UC--CAUUGCUGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAAGAGACCCGGGUUCAA 57
chr-12.trna61-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGAAGACCCGGGUUCAA 57
chr-19.trna79-Glu-TTC       UC--CAUUCUCGUCCAG-UGGUUAGGAUACUUGGCUUUCACCCAAGAGACCCGGGUUCAA 57
chr-21.trna8-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUUUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-26.trna20-Glu-TTC       UC--CAUUGUCGUCCAG-UGGUUAGGUUAUCUGGCUUUCACCUAGGAGACCCGGGUUCAA 57
chr-2.trna18-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUGUCUGGCUUUCACCCAGGAGACCCGUGUUCAA 57
chr-22.trna18-Glu-TTC       UC--AAUUGUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGGUUCAA 57
chr-10.trna82-Glu-TTC       UC--CGUUGUUGUCCAG-CGGUUAGGAUGUCUGGCUUUCACCCCGGAGACCCGGAUUCGA 57
chr-7.trna10-Glu-TTC        UC--CAUUAUCGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCGGAUUUAA 57
chr-10.trna43-Glu-TTC       UC--CGUUGUCGUCCAG-CGGUUAGGAUGUCUGGCUUUCACCCAGGAGACCCGGGUUCGA 57
chr-9.trna40-Glu-TTC        UC--CAUUGUCGUCCAG-UGGUUAGGAUAUCUUGCUUUCACCCAGGAGACCCGGGUUCUA 57
chr-20.trna51-Glu-TTC       GC-CCCC-AUCGUCUAGCGGUUAGGACACCUCUCUUUCAAGGAGGCAGCGGGGAUUCGA 58
chr-22.trna39-Glu-TTC       GC-CCCC-AUCGUCUAGCGGUUCAAGACACCUCUCUUUCAAGGAGGUAGCGGGGAUUUGA 58
chr-19.trna112-Glu-TTC      UG-CCCCCAUCGUCUAGCGGUUCAGGACACCUCUCUUUCAAGGAGGCAGCGGGGAUUCGA 59
chr-2.trna38-Glu-TTC        GU--CGUUGUAGUAUAG-UGGUGAGUAUUCCCGCUUUUCACGCGGCGACCCGGGUUUUA 57
chr-1.trna3-Glu-TTC         GU--CGUUGUAGUAUAG-UGGUGAGUAUUCCCGCUUUUCACGCGGCGACCCGGGUUUUA 57
chr-9.trna75-Glu-TTC        GU--CAUUGCAGUAUAG-UGGUAAGUAUUCCCCUCUUUCACGCGGUGACCCGAGUUCGA 57
chr-16.trna9-Glu-TTC        --UCCAUUGUGGUCCAG-UGGUUAGGAUAUCUGGCUUUCACCCUGGAGACCCAGCUUCCA 57
chr-16.trna8-Glu-TTC        CAUCCAUUGUGGUCCAG-GGGUUAGGAUAUCUGGCUUUCACCCAGGAGACCCAGCUUCCA 59
chr-3.trna38-Glu-CTC        C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACUUGGGUUCAA 57
chr-10.trna61-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-12.trna46-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-14.trna59-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-18.trna49-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-20.trna30-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-22.trna30-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGGGUUCAA 57
chr-10.trna23-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACUCGAGAGACCCGGGUUCAA 57
chr-24.trna60-Glu-CTC       C---CGUUGUAGUCUAGUUGGUUAGGAUACUCGGCUCUCACCCGAGAGACCCGAGUUCAA 57
chr-10.trna41-Glu-TTC       --------GUCGUCCAG-UGGUUAGGAUACUUGGCUUUCACCCAAGAGACCCGGGUUCAA 51
                                .........10........20........30........40........50.........
```



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                                ...............)..))))))))).....)...
chr-1.trna23-Glu-TTC        UU------------C--CCGUAAGGGA-----U--A 72
chr-15.trna2-Glu-TTC        UU------------C--CCGUAAGGGA-----U--A 72
chr-6.trna15-Glu-CTC        GU------------C--CCGGCAACGG-----A--A 73
chr-16.trna39-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna9-Glu-CTC        GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna10-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-21.trna34-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna11-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-20.trna81-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna12-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna55-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-17.trna56-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-19.trna62-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-19.trna67-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-5.trna14-Glu-CTC        GU------------C--CCGGCAACGG-----A--A 73
chr-19.trna80-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-19.trna81-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-13.trna47-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-18.trna13-Glu-CTC       GU------------C--CCGGCAACGG-----A--A 73
chr-10.trna57-Glu-CTC       GU------------C--CCGGCAUCGG-----A--A 73
chr-18.trna26-Glu-CTC       GU------------U--CCGGCAAUGU-----U--U 75
chr-1.trna40-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-9.trna41-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-10.trna45-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-10.trna80-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-26.trna8-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-19.trna100-Glu-TTC      UU------------C--CCGGCAAUGG-----A--A 72
chr-22.trna53-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-26.trna2-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-16.trna1-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-23.trna1-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-20.trna23-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-21.trna47-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-2.trna3-Glu-TTC         UU------------C--CCGGCAAUGG-----A--A 72
chr-12.trna61-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-19.trna79-Glu-TTC       UU------------C--CCGGGAAUGG-----A--A 72
chr-21.trna8-Glu-TTC        UU------------C--CUGGCAAUGG-----A--A 72
chr-26.trna20-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-2.trna18-Glu-TTC        UU------------C--CCGGCAAUGG-----A--A 72
chr-22.trna18-Glu-TTC       UU------------C--CCGGCAAUGG-----A--A 72
chr-10.trna82-Glu-TTC       UU------------C--UCGGCAACGG-----A--A 72
chr-7.trna10-Glu-TTC        UU------------C--CUGGCAAUGG-----A--A 72
chr-10.trna43-Glu-TTC       UU------------C--CCGGCAACGU-----A--A 72
chr-9.trna40-Glu-TTC        UU------------C--CCGGCAAUGU-----A--A 72
chr-20.trna51-Glu-TTC       CU------------U--CCCCUGGGGG-----U--A 73
chr-22.trna39-Glu-TTC       CU------------U--CCCCUGGGGG-----U--A 73
chr-19.trna112-Glu-TTC      CU------------U--CCCCUGGGGU-----A--G 74
chr-2.trna38-Glu-TTC        UC------------C--CCAGCAACGG-----U--G 72
chr-1.trna3-Glu-TTC         UC------------C--CCAGCAACGG-----U--G 72
chr-9.trna75-Glu-TTC        UC------------C--CCGGCAACGG-----C--A 72
chr-16.trna9-Glu-TTC        UU------------CUUCUGGCAAUGU-----G-UU 75
chr-16.trna8-Glu-TTC        UU------------CUUCUGGCAAUAU-----G--U 76
chr-3.trna38-Glu-CTC        GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-10.trna61-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-12.trna46-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-14.trna59-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-18.trna49-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-20.trna30-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-22.trna30-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-10.trna23-Glu-CTC       GU------------U--CCGGCAAUGUUUUGCU-UA 78
chr-24.trna60-Glu-CTC       GU------------U--UCGGCAAUGUUUUGCU-UA 78
chr-10.trna41-Glu-TTC       UUGAAGAAUUUUUUCCUCUUUACCCUGCAUUUUACCA 88
                                .........70........80........90......
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