1. Amino acid ratio:

|  |  |  |  |
| --- | --- | --- | --- |
| Ala | 9.77 | Met | 1.14 |
| Arg | 3.86 | Orn | 0.24 |
| Asx | 9.28 | Phe | 3.76 |
| Cys | 0.14 | Pro | 4.22 |
| Glx | 15.48 | Ser | 5.33 |
| Gly | 8.89 | Thr | 5.57 |
| His | 1.93 | Trp | 0.65 |
| Ile | 5.89 | Tyr | 1.96 |
| Leu | 8.01 | Val | 7.33 |
| Lys | 6.57 |  |  |

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=112800&ver=0&trm=Saccharomyces+cerevisiae+amino+acid+ratio&org>=

1. GC ratio: 38.3% <https://bionumbers.hms.harvard.edu/bionumber.aspx?id=102126&ver=2&trm=Saccharomyces+cerevisiae+gc+ratio&org>=
2. Average length of mRNA: 1250 nts

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=107678&ver=3&trm=Saccharomyces+cerevisiae+length+of+chromosomes&org>=

1. Average length of peptide: 1250/3=417 aas
2. Mean mRNA half life: 23 min

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=105511&ver=7&trm=Saccharomyces+cerevisiae+mean+half+life+of+mrna&org>=

1. Median mRNA decay constant: 5.6e-4 sec^-1

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=105510&ver=5&trm=Saccharomyces+cerevisiae+enzyme+degradation+constant&org>=

1. Average and median half life of protein: 43 min

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=104151&ver=11&trm=Saccharomyces+cerevisiae+mean+half+life+of+enzyme&org>=

1. Chromosomal length:

Goffeau, André, et al. "Life with 6000 genes." *Science* 274.5287 (1996): 546-567.

1. Translation rate: 10 aa/sec

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=105225&ver=7&trm=Saccharomyces+cerevisiae+translation+rate&org>=

1. Transcription rate: 40 nt/sec

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=109913&ver=6&trm=Saccharomyces+cerevisiae+rna+polymerization+rate&org>=

1. Ribosome footprint: 28-29 bp

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=114272&ver=2&trm=Saccharomyces+cerevisiae+ribozome+footprint&org>=

1. Ribosome occupation ratio:
2. Total RNA per cell ratio: 3.8-13 g/cell
3. Total protein per cell ratio: 1.9e-12 g/cell
4. Total cellular mass: 60 pg

<https://bionumbers.hms.harvard.edu/bionumber.aspx?s=y&id=101795&hlid=64639>

1. Fraction of cell that is water: 60.4%

<https://bionumbers.hms.harvard.edu/bionumber.aspx?id=103689>