Supplementary data

Estimate of number of mRNA molecules per cell

The measured yield of total RNA from 1×10^8 procyclic cells is 100 µg

The recovery of polyadenylated RNA after oligo dT cellulose chromatography is 4 %. Thus, 1×10^8 procyclic cells contain up to 4 µg of mRNA (the polyadenylated RNA is contaminated with ribosomal RNA)

An estimate for an average mRNA is 1500 nucleotides long
The average mRNA has a molecular weight of 1500 x 345

The number of mRNA molecules cells is thus:

$$\frac{4 \times 10^{-6} \times 6 \times 10^{23}}{1500 \times 345 \times 10^8} = \frac{24 \times 10^9}{1500 \times 345} \qquad \sim 50\ 000 \text{ molecules mRNA/procyclic cell}$$