TABLE 1

Base-ratios of E. coli *ML30 RNA made under varying conditions of growth*[a]

	Base composition (mole %)				Stable-RNA content[h] (%)
	C	A	G	U	
Stable species[b]	21·8	24·8	32·4	21·0	100
Shift-up[c]	22·4	24·5	30·7	22·3	74
Steady-state, Casamino acids[d]	23·4	25·1	29·8	21·8	63
Theory (2/1, stable/unstable)	23·1	24·7	30·1	22·1	67
Theory (1/1, stable/unstable)	23·7	24·7	29·0	22·6	50
Steady-state, minimal[e]	23·3	24·4	28·8	23·5	47
Shift-down[f]	24·8	24·3	27·4	23·6	25
Unstable species[g]	25·6	24·6	25·6	24·3	0

[a]Each experiment represents the average of two triplicate determinations of the base ratios by electrophoresis as described in Materials and Methods.

[b]Cells labeled three generations and chased. See note to Table 2.

[c]A culture was grown in minimal-glucose as described in Materials and Methods to an O.D. value of 0·6 and divided with portions being transferred to Tris/glucose media containing either 2 mg Casamino acids/ml. or 8×10^{-5} M-KH_2PO_4. Five-ml. portions of these cultures received 0·2 mCi [^{32}P]phosphate/ml., and after 2 min were harvested. The shift-up culture was labeled 4 min after resuspension, and the control culture at 9 min. The data from this latter culture, averaged with a second experiment, are those listed in the Table as steady-state, minimal.

[d]Average of two experiments. See footnote[f].

[e]Average of two experiments. See footnote[c].

[f]A culture was grown in Casamino acids medium to an O.D. value of 0·6 and collected and washed as described previously, with portions being resuspended in either the same Casamino acids medium, to serve as the steady-state control, or in minimal-glucose with 4×10^{-5} M-KH_2PO_4, the shift-down. Five-ml. portions of these cultures received [^{32}P]phosphate: the control culture, 0·1 mCi/ml. 10 min after resuspension, and the shift-down, 0·3 mCi/ml. 28 min after resuspension, at which time growth was just resuming. After 2 min labeling, each culture was harvested and the base ratio composition of the purified RNA determined as described. The average of data from two experiments is given, the control culture being listed as steady-state, Casamino acids.

[g]DNA composition of *E. coli* with uracil replacing thymine (Rudner, Rejman & Chargaff, 1965).

[h]From Fig. 3.