



Figure 1. Numbering of nucleotides in tRNAs. Circles represent nucleotides which are always present; the ovals, nucleotides which are not present in each structure: these are nucleotides before the position 1 on the 5'-end, before and after the two invariant GMP residues 18 and 19 in the D-loop, and the nucleotides in the variable loop. The nucleotide to be added at a given site is indicated by the number of the preceding nucleotide followed by a colon and a letter in alphabetical order. The nucleotides in the variable stem have the prefix 'e' and are located between position 45 and 46 obeying the base-pairing rules. The nucleotides in the 5'-strand and the 3'-strand are numbered by e11, e12, e13, ... and e21, e22, e23, ..., respectively; the second digit identifies the base-pair. In the case of a long variable region, the loop can be formed by up to 5 nt: e1, e2, e3, e4 and e5. Positions, in which invariant nucleotides usually occur are indicated by a thick line.