

**Table 5.** Example calculation of DNA macromolecular formula for *A. acidocaldarius* with 61.9% GC content, assuming a polymer length of 1 monomer. Polymerization byproducts (diphosphate) are subtracted from the sum of dNTP monomer constituents to obtain the formula for a DNA macromolecule. Overall DNA synthesis reaction is shown in the last row.

Monomer	Stoichiometry/Formula	C	H	O	N	P
dATP	0.19/C <sub>10</sub> H <sub>12</sub> N <sub>5</sub> O <sub>12</sub> P <sub>3</sub>	1.91	2.29	2.29	0.95	0.57
dCTP	0.31/C <sub>9</sub> H <sub>12</sub> N <sub>3</sub> O <sub>13</sub> P <sub>3</sub>	2.79	3.71	4.02	0.93	0.93
dGTP	0.31/C <sub>10</sub> H <sub>12</sub> N <sub>5</sub> O <sub>13</sub> P <sub>3</sub>	3.10	3.71	4.02	1.55	0.93
dTTP	0.19/C <sub>10</sub> H <sub>13</sub> N <sub>2</sub> O <sub>14</sub> P <sub>3</sub>	1.91	2.48	2.67	0.38	0.57
Diphosphate	1/HO <sub>7</sub> P <sub>2</sub>	0.00	1.00	7.00	0.00	2.00
DNA molecule	1/C <sub>9.69</sub> H <sub>11.19</sub> N <sub>3.81</sub> O <sub>6</sub> P <sub>1</sub>	9.69	11.19	6.00	3.81	1.00
<b>0.19 dATP + 0.31 dCTP + 0.31 dGTP + 0.19 dTTP = 1 DNA + 1 diphosphate</b>						