

Table V-4b. Average compositions of juvenile upper continental crusts as a function of age, and the present-day average composition of the upper continental crust. (Modified after table 3 by Condie [1993]).

|                                | Juvenile upper crust |         |         | Present upper crust |        | Juvenile upper crust |         |         | Present upper crust |
|--------------------------------|----------------------|---------|---------|---------------------|--------|----------------------|---------|---------|---------------------|
|                                | >3.5-2.5             | 2.5-0.8 | 0.8-0.2 |                     |        | >3.5-2.5             | 2.5-0.8 | 0.8-0.2 |                     |
|                                | (Ga)                 |         |         |                     | (Ga)   |                      |         |         |                     |
| SiO <sub>2</sub> %             | 66.25                | 65.92   | 65.69   | 66.21               | Nb ppm | 8.4                  | 11.3    | 11.6    | 9.8                 |
| TiO <sub>2</sub>               | 0.44                 | 0.63    | 0.67    | 0.55                | Ta     | 0.7                  | 0.88    | 0.9     | 0.79                |
| Al <sub>2</sub> O <sub>3</sub> | 14.8                 | 14.98   | 15.18   | 14.96               | Y      | 18                   | 30      | 30      | 24                  |
| FeO                            | 4.5                  | 4.77    | 4.99    | 4.7                 | La     | 29.5                 | 28.5    | 25.5    | 28.4                |
| MgO                            | 3                    | 2.15    | 2.23    | 2.42                | Ce     | 56.7                 | 59.3    | 56.3    | 57.5                |
| CaO                            | 3.55                 | 3.5     | 3.82    | 3.6                 | Nd     | 25                   | 26.7    | 25.3    | 25.6                |
| Na <sub>2</sub> O              | 3.66                 | 3.29    | 3.36    | 3.51                | Sm     | 4                    | 5.25    | 5       | 4.59                |
| K <sub>2</sub> O               | 2.53                 | 3.01    | 2.83    | 2.73                | Eu     | 0.98                 | 1.17    | 1.02    | 1.05                |
| P <sub>2</sub> O <sub>5</sub>  | 0.11                 | 0.14    | 0.14    | 0.12                | Gd     | 3.53                 | 4.9     | 4.76    | 4.21                |
|                                |                      |         |         |                     | Tb     | 0.54                 | 0.77    | 0.75    | 0.66                |
| Rb ppm                         | 73                   | 93      | 92      | 83                  | Yb     | 1.53                 | 2.25    | 2.31    | 1.91                |
| Sr                             | 294                  | 290     | 267     | 289                 | Lu     | 0.26                 | 0.36    | 0.41    | 0.32                |
| Ba                             | 569                  | 692     | 695     | 633                 | Sc     | 10.9                 | 15.9    | 15.6    | 13.3                |
| Pb                             | 18                   | 17      | 16      | 17                  | V      | 72                   | 97      | 108     | 86                  |
| Th                             | 8                    | 9.3     | 8.9     | 8.6                 | Cr     | 186                  | 61      | 51      | 104                 |
| U                              | 2.1                  | 2.4     | 2.4     | 2.2                 | Co     | 21                   | 17      | 16      | 18                  |
| Zr                             | 148                  | 173     | 168     | 160                 | Ni     | 105                  | 33      | 28      | 56                  |
| Hf                             | 3.9                  | 4.9     | 4.5     | 4.3                 |        |                      |         |         |                     |