Supplementary Table S1. Representative plagioclase compositions of the Jiacha Early Jurassic adakitic intrusions.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Analysis | SiO2 | TiO2 | Al2O3 | Cr2O3 | FeO | MnO | NiO | CaO | Na2O | K2O | MgO | Total |  | An | Ab | Or |
| quartz diorite: GD14-90-2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 59.17  | 0.01  | 25.41  | 0.03  | 0.06  | 0.00  | 0.03  | 7.98  | 6.63  | 0.24  | 0.00  | 99.57  |  | 39  | 59  | 1  |
| 2 | 59.08  | 0.00  | 25.32  | 0.00  | 0.08  | 0.00  | 0.00  | 8.36  | 6.35  | 0.18  | 0.01  | 99.38  |  | 42  | 57  | 1  |
| 3 | 58.53  | 0.01  | 25.53  | 0.00  | 0.07  | 0.00  | 0.00  | 8.49  | 6.35  | 0.15  | 0.00  | 99.12  |  | 42  | 57  | 1  |
| 4 | 58.92  | 0.00  | 25.64  | 0.03  | 0.12  | 0.01  | 0.00  | 8.35  | 6.36  | 0.13  | 0.00  | 99.56  |  | 42  | 57  | 1  |
| 5 | 61.03  | 0.01  | 24.41  | 0.02  | 0.13  | 0.01  | 0.03  | 6.51  | 7.47  | 0.27  | 0.00  | 99.90  |  | 32  | 66  | 2  |
| 6 | 58.32  | 0.00  | 25.66  | 0.00  | 0.10  | 0.00  | 0.05  | 8.43  | 6.45  | 0.23  | 0.00  | 99.24  |  | 41  | 57  | 1  |
| 7 | 58.52  | 0.00  | 25.61  | 0.00  | 0.06  | 0.01  | 0.00  | 8.50  | 6.26  | 0.21  | 0.00  | 99.17  |  | 42  | 56  | 1  |
| 8 | 58.47  | 0.00  | 25.73  | 0.00  | 0.09  | 0.00  | 0.01  | 8.35  | 6.33  | 0.23  | 0.00  | 99.21  |  | 42  | 57  | 1  |
| 9 | 58.25  | 0.02  | 25.60  | 0.00  | 0.09  | 0.00  | 0.02  | 8.81  | 6.26  | 0.23  | 0.01  | 99.27  |  | 43  | 55  | 1  |
| 10 | 58.93  | 0.03  | 25.48  | 0.04  | 0.10  | 0.01  | 0.00  | 7.94  | 6.58  | 0.25  | 0.01  | 99.37  |  | 39  | 59  | 1  |
| 11 | 59.70  | 0.01  | 24.99  | 0.02  | 0.09  | 0.03  | 0.00  | 7.50  | 6.63  | 0.20  | 0.00  | 99.16  |  | 38  | 61  | 1  |
| 12 | 58.98  | 0.00  | 25.20  | 0.00  | 0.10  | 0.00  | 0.00  | 8.23  | 6.57  | 0.23  | 0.00  | 99.31  |  | 40  | 58  | 1  |
| 13 | 59.61  | 0.01  | 25.11  | 0.00  | 0.10  | 0.01  | 0.00  | 7.66  | 6.60  | 0.24  | 0.00  | 99.33  |  | 39  | 60  | 1  |
| 14 | 58.78  | 0.00  | 25.46  | 0.00  | 0.06  | 0.04  | 0.05  | 8.24  | 6.38  | 0.15  | 0.00  | 99.17  |  | 41  | 58  | 1  |
| 15 | 60.93  | 0.03  | 24.37  | 0.00  | 0.10  | 0.02  | 0.00  | 6.32  | 7.31  | 0.20  | 0.00  | 99.29  |  | 32  | 67  | 1  |
| 16 | 58.95  | 0.00  | 25.44  | 0.01  | 0.10  | 0.00  | 0.01  | 8.10  | 6.37  | 0.24  | 0.00  | 99.23  |  | 41  | 58  | 1  |
| 17 | 58.26  | 0.00  | 25.77  | 0.00  | 0.18  | 0.02  | 0.00  | 8.62  | 6.19  | 0.25  | 0.00  | 99.30  |  | 43  | 56  | 1  |
| 18 | 58.80  | 0.04  | 25.47  | 0.01  | 0.08  | 0.00  | 0.01  | 8.16  | 6.65  | 0.13  | 0.00  | 99.37  |  | 40  | 59  | 1  |
| 19 | 59.47  | 0.00  | 25.14  | 0.00  | 0.09  | 0.00  | 0.01  | 7.49  | 6.73  | 0.19  | 0.00  | 99.12  |  | 38  | 61  | 1  |
| 20 | 57.00  | 0.03  | 26.79  | 0.00  | 0.13  | 0.00  | 0.00  | 9.86  | 5.43  | 0.11  | 0.00  | 99.33  |  | 50  | 50  | 1  |
| 21 | 57.93  | 0.00  | 26.65  | 0.01  | 0.20  | 0.03  | 0.01  | 8.58  | 6.16  | 0.15  | 0.00  | 99.71  |  | 43  | 56  | 1  |
| mafic enclave: GD14-90-3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 | 58.06  | 0.00  | 26.49  | 0.00  | 0.04  | 0.00  | 0.00  | 9.49  | 5.61  | 0.20  | 0.00  | 99.89  |  | 48  | 51  | 1  |
| 23 | 58.01  | 0.00  | 26.04  | 0.01  | 0.09  | 0.00  | 0.00  | 9.70  | 5.66  | 0.18  | 0.00  | 99.70  |  | 48  | 51  | 1  |
| 24 | 52.60  | 0.00  | 29.54  | 0.03  | 0.11  | 0.00  | 0.00  | 13.66  | 3.50  | 0.10  | 0.00  | 99.53  |  | 68  | 32  | 1  |
| 25 | 58.80  | 0.01  | 25.53  | 0.00  | 0.08  | 0.02  | 0.01  | 8.78  | 6.24  | 0.24  | 0.00  | 99.71  |  | 43  | 55  | 1  |
| 26 | 57.75  | 0.00  | 26.36  | 0.00  | 0.10  | 0.00  | 0.00  | 9.85  | 5.50  | 0.21  | 0.00  | 99.76  |  | 49  | 50  | 1  |
| 27 | 58.81  | 0.00  | 25.65  | 0.00  | 0.07  | 0.00  | 0.06  | 8.66  | 6.26  | 0.26  | 0.00  | 99.78  |  | 43  | 56  | 2  |
| 28 | 59.16  | 0.00  | 25.42  | 0.00  | 0.04  | 0.00  | 0.00  | 8.48  | 6.45  | 0.15  | 0.00  | 99.71  |  | 42  | 57  | 1  |
| 29 | 57.86  | 0.00  | 26.44  | 0.05  | 0.11  | 0.00  | 0.01  | 9.79  | 5.53  | 0.16  | 0.01  | 99.97  |  | 49  | 50  | 1  |
| 30 | 59.14  | 0.00  | 25.44  | 0.00  | 0.31  | 0.00  | 0.00  | 8.85  | 5.94  | 0.23  | 0.00  | 99.91  |  | 45  | 54  | 1  |
| 31 | 58.45  | 0.02  | 25.98  | 0.00  | 0.15  | 0.01  | 0.02  | 9.34  | 5.72  | 0.23  | 0.00  | 99.92  |  | 47  | 52  | 1  |
| 32 | 58.38  | 0.03  | 25.85  | 0.00  | 0.08  | 0.00  | 0.00  | 9.46  | 5.71  | 0.18  | 0.00  | 99.70  |  | 47  | 52  | 1  |
| 33 | 60.18  | 0.01  | 24.71  | 0.05  | 0.06  | 0.00  | 0.01  | 7.74  | 6.54  | 0.17  | 0.01  | 99.47  |  | 39  | 60  | 1  |
| 34 | 58.38  | 0.01  | 25.86  | 0.00  | 0.23  | 0.00  | 0.02  | 8.97  | 5.95  | 0.20  | 0.00  | 99.63  |  | 45  | 54  | 1  |
| 35 | 57.74  | 0.00  | 26.28  | 0.00  | 0.13  | 0.01  | 0.00  | 9.37  | 5.84  | 0.14  | 0.00  | 99.50  |  | 47  | 53  | 1  |
| 36 | 59.22  | 0.00  | 25.29  | 0.00  | 0.14  | 0.00  | 0.01  | 8.37  | 6.37  | 0.20  | 0.00  | 99.58  |  | 42  | 57  | 1  |
| 37 | 59.09  | 0.00  | 25.25  | 0.00  | 0.05  | 0.00  | 0.00  | 8.49  | 6.45  | 0.20  | 0.02  | 99.53  |  | 42  | 57  | 1  |
| tonalite: GD14-102-1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 40 | 61.56  | 0.00  | 24.16  | 0.00  | 0.13  | 0.02  | 0.00  | 0.01  | 6.80  | 7.61  | 0.16  | 100.46  |  | 33  | 66  | 1  |
| 41 | 59.29  | 0.00  | 25.48  | 0.04  | 0.16  | 0.00  | 0.01  | 0.00  | 7.08  | 7.10  | 0.17  | 99.32  |  | 35  | 64  | 1  |
| 42 | 56.86  | 0.00  | 26.76  | 0.03  | 0.19  | 0.00  | 0.00  | 0.00  | 9.08  | 6.04  | 0.27  | 99.22  |  | 45  | 54  | 2  |
| 43 | 57.80  | 0.01  | 26.05  | 0.00  | 0.23  | 0.00  | 0.00  | 0.00  | 8.26  | 6.52  | 0.27  | 99.13  |  | 41  | 58  | 2  |
| 44 | 58.64  | 0.00  | 26.19  | 0.00  | 0.17  | 0.00  | 0.03  | 0.01  | 9.28  | 5.87  | 0.30  | 100.48  |  | 46  | 52  | 2  |
| 45 | 57.45  | 0.02  | 26.60  | 0.00  | 0.21  | 0.02  | 0.00  | 0.00  | 9.71  | 5.74  | 0.23  | 99.96  |  | 48  | 51  | 1  |
| 46 | 57.94  | 0.04  | 26.23  | 0.01  | 0.10  | 0.00  | 0.00  | 0.00  | 8.04  | 6.73  | 0.27  | 99.37  |  | 39  | 59  | 2  |
| 47 | 60.13  | 0.00  | 25.38  | 0.02  | 0.03  | 0.01  | 0.00  | 0.01  | 7.87  | 6.98  | 0.09  | 100.52  |  | 38  | 61  | 1  |
| 48 | 57.10  | 0.00  | 26.67  | 0.00  | 0.24  | 0.00  | 0.00  | 0.00  | 8.87  | 6.30  | 0.20  | 99.38  |  | 43  | 56  | 1  |
| 49 | 58.77  | 0.00  | 25.88  | 0.00  | 0.17  | 0.00  | 0.00  | 0.00  | 9.08  | 6.26  | 0.22  | 100.38  |  | 44  | 55  | 1  |
| 50 | 58.57  | 0.03  | 26.00  | 0.00  | 0.12  | 0.00  | 0.01  | 0.00  | 9.33  | 6.08  | 0.15  | 100.31  |  | 45  | 54  | 1  |
| 51 | 58.51  | 0.00  | 26.18  | 0.00  | 0.19  | 0.00  | 0.00  | 0.00  | 8.98  | 6.24  | 0.20  | 100.31  |  | 44  | 55  | 1  |
| 52 | 56.94  | 0.02  | 26.99  | 0.00  | 0.16  | 0.00  | 0.01  | 0.00  | 9.07  | 6.22  | 0.13  | 99.55  |  | 44  | 55  | 1  |
| 53 | 58.58  | 0.01  | 25.98  | 0.00  | 0.16  | 0.00  | 0.00  | 0.00  | 9.15  | 6.09  | 0.23  | 100.20  |  | 45  | 54  | 1  |
| 54 | 57.03  | 0.01  | 27.12  | 0.00  | 0.14  | 0.00  | 0.00  | 0.00  | 8.92  | 6.17  | 0.20  | 99.58  |  | 44  | 55  | 1  |
| 55 | 60.82  | 0.02  | 24.65  | 0.01  | 0.17  | 0.02  | 0.02  | 0.00  | 7.38  | 7.19  | 0.21  | 100.50  |  | 36  | 63  | 1  |
| 56 | 60.70  | 0.00  | 24.75  | 0.01  | 0.12  | 0.00  | 0.00  | 0.00  | 7.40  | 7.11  | 0.18  | 100.28  |  | 36  | 63  | 1  |
| tonalite: GD14-101-1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 57 | 59.17  | 0.00  | 25.77  | 0.00  | 0.07  | 0.02  | 0.00  | 0.00  | 8.85  | 6.46  | 0.14  | 100.48  |  | 43  | 56  | 1  |
| 58 | 59.45  | 0.00  | 25.35  | 0.00  | 0.13  | 0.01  | 0.00  | 0.00  | 8.23  | 6.61  | 0.11  | 99.89  |  | 41  | 59  | 1  |
| 59 | 60.29  | 0.00  | 24.68  | 0.01  | 0.12  | 0.01  | 0.00  | 0.00  | 7.89  | 6.87  | 0.16  | 100.03  |  | 38  | 61  | 1  |
| 60 | 60.65  | 0.03  | 24.66  | 0.00  | 0.13  | 0.00  | 0.00  | 0.00  | 7.57  | 7.18  | 0.19  | 100.40  |  | 36  | 63  | 1  |
| 61 | 62.32  | 0.00  | 23.55  | 0.00  | 0.16  | 0.00  | 0.01  | 0.00  | 6.38  | 7.70  | 0.21  | 100.33  |  | 31  | 68  | 1  |
| 62 | 61.73  | 0.00  | 24.02  | 0.04  | 0.06  | 0.00  | 0.00  | 0.02  | 6.52  | 7.56  | 0.12  | 100.08  |  | 32  | 67  | 1  |
| 63 | 57.99  | 0.00  | 26.71  | 0.00  | 0.10  | 0.00  | 0.03  | 0.00  | 8.53  | 6.38  | 0.16  | 99.90  |  | 42  | 57  | 1  |
| 64 | 60.42  | 0.02  | 24.93  | 0.02  | 0.15  | 0.01  | 0.03  | 0.02  | 7.90  | 6.78  | 0.20  | 100.46  |  | 39  | 60  | 1  |