附表1 大港锂矿床白云母花岗岩云母族矿物EPMA分析结果

Extend table 1 Results of mica-group mineral EPMA dating for the muscovite granite in the Dagang Li deposit

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| 样品编号 | 21DG-1-Mus-1 | 21DG-1-Mus-2 | 21DG-1-Mus-3 | 21DG-1-Mus-4 | 21DG-1-Mus-5 | 21DG-1-Mus-6 | 21DG-1-Mus-7 | 21DG-1-Mus-8 | 21DG-1-Mus-9 | 21DG-1-Mus-10 | 21DG-1-Mus-11 | 21DG-1-Mus-12 |
| TiO2 | 0.03 | bdl. | 0.05 | 0.02 | 0.05 | 0.07 | 0.00 | 0.04 | 0.03 | 0.06 | 0.13 | 0.11 |
| Cs2O | 0.06 | 0.01 | 0.04 | 0.02 | 0.02 | 0.01 | 0.30 | bdl. | 0.02 | 0.07 | bdl. | 0.01 |
| CaO | 0.01 | 0.03 | bdl. | bdl. | 0.01 | 0.03 | 0.02 | 0.01 | 0.01 | 0.04 | 0.02 | 0.02 |
| K2O | 10.90 | 10.54 | 10.63 | 10.97 | 10.89 | 10.81 | 10.98 | 10.71 | 10.55 | 10.70 | 10.95 | 10.39 |
| Cl | bdl. | 0.01 | bdl. | 0.01 | bdl. | bdl. | bdl. | bdl. | bdl. | bdl. | bdl. | 0.01 |
| MnO | 0.44 | 0.27 | 0.47 | 0.45 | 0.42 | 0.59 | 0.90 | 0.36 | 0.42 | 0.71 | 0.58 | 0.39 |
| FeO | 3.56 | 3.03 | 3.12 | 3.67 | 2.98 | 1.66 | 2.22 | 2.41 | 4.85 | 2.40 | 2.07 | 6.46 |
| F | 2.88 | 1.63 | 2.53 | 2.82 | 2.39 | 2.75 | 3.98 | 1.84 | 2.05 | 2.91 | 2.53 | 2.70 |
| Na2O | 0.32 | 0.60 | 0.57 | 0.32 | 0.39 | 0.52 | 0.28 | 0.58 | 0.52 | 0.53 | 0.38 | 0.56 |
| MgO | 0.03 | bdl. | 0.01 | bdl. | 0.03 | 0.03 | 0.01 | 0.01 | 0.01 | 0.05 | 0.12 | 0.34 |
| Al2O3 | 30.72 | 32.81 | 32.07 | 31.17 | 32.20 | 32.29 | 28.58 | 33.23 | 30.70 | 31.16 | 32.02 | 29.84 |
| Rb2O | 0.59 | 0.55 | 0.70 | 0.61 | 0.61 | 0.55 | 0.93 | 0.52 | 0.65 | 0.73 | 0.56 | 0.65 |
| SiO2 | 45.19 | 44.85 | 45.27 | 44.74 | 44.70 | 45.65 | 46.76 | 45.27 | 44.18 | 45.64 | 45.44 | 44.08 |
| Total | 93.51 | 93.64 | 94.38 | 93.60 | 93.68 | 93.79 | 93.30 | 94.22 | 93.13 | 93.77 | 93.74 | 94.42 |
| Li2O\* | 3.40 | 3.30 | 3.42 | 3.27 | 3.26 | 3.53 | 3.86 | 3.42 | 3.11 | 3.53 | 3.47 | 3.08 |
| Li2O\*计算基于Tischendorf et al. (1997); bdl.-低于检测限 |
| 以24个阴离子为基准计算的阳离子数 |
| Si | 6.32 | 6.34 | 6.29 | 6.28 | 6.28 | 6.30 | 6.42 | 6.32 | 6.34 | 6.33 | 6.32 | 6.24 |
| AlIV | 1.68 | 1.66 | 1.71 | 1.72 | 1.72 | 1.70 | 1.58 | 1.68 | 1.66 | 1.67 | 1.68 | 1.76 |
| T-site | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| AlVI | 3.39  | 3.81  | 3.54  | 3.43  | 3.61  | 3.56  | 3.05  | 3.78  | 3.53  | 3.42  | 3.56  | 3.23  |
| Ti |  |  | 0.01  |  |  | 0.01  |  |  |  | 0.01  | 0.01  | 0.01  |
| Fe | 0.42  | 0.36  | 0.36  | 0.43  | 0.35  | 0.19  | 0.26  | 0.28  | 0.58  | 0.28  | 0.24  | 0.76  |
| Mn | 0.05  | 0.03  | 0.05  | 0.05  | 0.05  | 0.07  | 0.10  | 0.04  | 0.05  | 0.08  | 0.07  | 0.05  |
| Mg | 0.01  |  |  |  | 0.01  | 0.01  |  |  |  | 0.01  | 0.02  | 0.07  |
| Li | 1.91  | 1.88  | 1.91  | 1.85  | 1.84  | 1.96  | 2.13  | 1.92  | 1.79  | 1.97  | 1.94  | 1.76  |
| Y-site | 5.78  | 6.07  | 5.88  | 5.76  | 5.86  | 5.79  | 5.55  | 6.04  | 5.96  | 5.77  | 5.85  | 5.88  |
| Ca |  |  |  |  |  | 0.01  |  |  |  | 0.01  |  |  |
| Na | 0.09  | 0.16  | 0.15  | 0.09  | 0.10  | 0.14  | 0.08  | 0.16  | 0.15  | 0.14  | 0.10  | 0.15  |
| K | 1.95  | 1.90  | 1.88  | 1.96  | 1.95  | 1.90  | 1.92  | 1.91  | 1.93  | 1.89  | 1.94  | 1.88  |
| Rb | 0.05  | 0.05  | 0.06  | 0.05  | 0.05  | 0.05  | 0.08  | 0.05  | 0.06  | 0.07  | 0.05  | 0.06  |
| Cs | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.02  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| X-site | 2.09  | 2.12  | 2.10  | 2.11  | 2.11  | 2.10  | 2.10  | 2.11  | 2.14  | 2.11  | 2.10  | 2.10  |
| F | 1.27  | 0.73  | 1.11  | 1.25  | 1.06  | 1.20  | 1.73  | 0.81  | 0.93  | 1.28  | 1.11  | 1.21  |
| Cl | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| OH | 2.73  | 3.27  | 2.89  | 2.75  | 2.94  | 2.80  | 2.27  | 3.19  | 3.07  | 2.72  | 2.89  | 2.79  |
| Z-site | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |

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| 样品编号 | 22DG-2-Mus-4  | 22DG-2-Mus-5  | 22DG-2-Mus-6  | 22DG-2-Mus-7  | 22DG-2-Mus-8  | 22DG-2-Mus-9  | 22DG-2-Mus-1  | 22DG-2-Mus-2  | 22DG-2-Mus-3  | 22DG-3-Mus-1  | 22DG-3-Mus-2  | 22DG-3-Mus-3  |
| TiO2 | bdl.  | 0.06  | bdl. | 0.03  | 0.00  | 0.23  | 0.03  | 0.04  | 0.02  | bdl. | 0.04  | bdl. |
| Cs2O | 0.12  | 0.19  | 0.18  | bdl. | 0.19  | 0.12  | 0.04  | 0.02  | 0.10  | 0.41  | 0.12  | 0.33  |
| CaO | 0.01  | 0.03  | 0.02  | bdl. | 0.02  | 0.01  | 0.02  | 0.01  | bdl. | bdl. | 0.01  | bdl.  |
| K2O | 10.89  | 10.82  | 10.38  | 10.66  | 9.83  | 10.71  | 11.06  | 10.74  | 11.12  | 10.59  | 11.06  | 10.89  |
| Cl | 0.02  | 0.01  | 0.01  | bdl. | bdl. | bdl.  | bdl. | 0.01  | bdl. | bdl.  | 0.01  | 0.01  |
| MnO | 1.17  | 0.59  | 1.23  | 0.45  | 0.97  | 0.54  | 0.76  | 0.58  | 0.61  | 1.25  | 0.72  | 0.86  |
| FeO | 3.01  | 1.72  | 3.08  | 5.61  | 2.66  | 4.21  | 2.84  | 1.92  | 2.74  | 3.06  | 2.67  | 2.10  |
| F | 5.34  | 2.35  | 5.80  | 2.94  | 3.76  | 2.19  | 2.89  | 2.30  | 2.68  | 5.94  | 2.94  | 3.86  |
| Na2O | 0.28  | 0.42  | 0.36  | 0.58  | 0.29  | 0.33  | 0.40  | 0.50  | 0.34  | 0.22  | 0.40  | 0.24  |
| MgO | 0.02  | 0.02  | 0.02  | 0.00  | 0.03  | 0.55  | 0.01  | 0.01  | 0.02  | bdl. | bdl. | bdl. |
| Al2O3 | 24.10  | 32.51  | 23.75  | 30.55  | 27.57  | 30.43  | 31.32  | 32.33  | 31.82  | 23.48  | 29.96  | 28.31  |
| Rb2O | 1.33  | 0.55  | 1.42  | 0.71  | 1.08  | 0.65  | 0.71  | 0.62  | 0.70  | 1.63  | 0.73  | 1.01  |
| SiO2 | 47.95  | 44.83  | 48.80  | 44.64  | 47.77  | 45.13  | 45.50  | 45.10  | 45.71  | 48.88  | 46.08  | 47.28  |
| Total | 92.00  | 93.09  | 92.60  | 94.94  | 92.57  | 94.18  | 94.35  | 93.21  | 94.73  | 92.96  | 93.49  | 93.26  |
| Li2O\* | 4.20  | 3.30  | 4.44  | 3.24  | 4.15  | 3.38  | 3.49  | 3.38  | 3.55  | 4.47  | 3.66  | 4.01  |
| Li2O\*计算基于Tischendorf et al. (1997); bdl.-低于检测限 |
| 以24个阴离子为基准计算的阳离子数 |
| Si | 6.57 | 6.30 | 6.58 | 6.24  | 6.57  | 6.36  | 6.30  | 6.33  | 6.31  | 6.58  | 6.42  | 6.49  |
| AlIV | 1.43 | 1.70 | 1.42 | 1.76  | 1.43  | 1.64  | 1.70  | 1.67  | 1.69  | 1.42  | 1.58  | 1.51  |
| T-site | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| AlVI | 2.47  | 3.68  | 2.35  | 3.26  | 3.04  | 3.41  | 3.41  | 3.67  | 3.49  | 2.31  | 3.33  | 3.07  |
| Ti |  | 0.01  |  |  |  | 0.02  |  |  |  |  |  |  |
| Fe | 0.35  | 0.20  | 0.35  | 0.66  | 0.31  | 0.50  | 0.33  | 0.23  | 0.32  | 0.34  | 0.31  | 0.24  |
| Mn | 0.14  | 0.07  | 0.14  | 0.05  | 0.11  | 0.06  | 0.09  | 0.07  | 0.07  | 0.14  | 0.08  | 0.10  |
| Mg |  | 0.01  | 0.00  |  | 0.01  | 0.12  |  |  |  |  |  |  |
| Li | 2.32  | 1.86  | 2.41  | 1.82  | 2.29  | 1.92  | 1.94  | 1.90  | 1.97  | 2.42  | 2.05  | 2.21  |
| Y-site | 5.27  | 5.83  | 5.26  | 5.80  | 5.75  | 6.03  | 5.78  | 5.87  | 5.86  | 5.22  | 5.78  | 5.62  |
| Ca |  |  |  |  |  |  |  |  |  |  |  |  |
| Na | 0.08  | 0.11  | 0.10  | 0.16  | 0.08  | 0.09  | 0.11  | 0.14  | 0.09  | 0.06  | 0.11  | 0.06  |
| K | 1.91  | 1.94  | 1.79  | 1.90  | 1.72  | 1.92  | 1.95  | 1.92  | 1.96  | 1.82  | 1.96  | 1.91  |
| Rb | 0.12  | 0.05  | 0.12  | 0.06  | 0.10  | 0.06  | 0.06  | 0.06  | 0.06  | 0.14  | 0.07  | 0.09  |
| Cs | 0.01  | 0.01  | 0.01  |  | 0.01  | 0.01  |  |  | 0.01  | 0.02  | 0.01  | 0.02  |
| X-site | 2.11  | 2.12  | 2.02  | 2.12  | 1.91  | 2.08  | 2.13  | 2.12  | 2.12  | 2.04  | 2.15  | 2.08  |
| F | 2.32  | 1.04  | 2.47  | 1.30  | 1.63  | 0.98  | 1.27  | 1.02  | 1.17  | 2.53  | 1.29  | 1.67  |
| Cl | 0.01  | 0.00  | 0.00  |  |  |  |  |  |  |  |  |  |
| OH | 1.68  | 2.96  | 1.53  | 2.70  | 2.37  | 3.02  | 2.73  | 2.98  | 2.83  | 1.47  | 2.70  | 2.32  |
| Z-site | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |

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| 样品编号 | 22DG-3-Mus-4  | 22DG-3-Mus-5  | 22DG-1-Mus-1  | 22DG-1-Mus-2  | 22DG-1-Mus-3  | 22DG-1-Mus-4  | 22DG-1-Mus-5  | 22DG-1-Mus-6  | 22DG-1-Mus-7  |
| TiO2 | 0.03  | 0.03  | 0.07  | 0.09  | 0.05  | 0.02  | 0.06  | 0.09  | bdl. |
| Cs2O | 0.01  | 0.02  | bdl.  | 0.01  | 0.04  | 0.07  | 0.01  | bdl.  | 0.11  |
| CaO | 0.01  | 0.02  | bdl.  | 0.01  | 0.05  | 0.03  | 0.01  | 0.01  | 0.01  |
| K2O | 10.59  | 11.06  | 10.77  | 10.71  | 10.81  | 10.06  | 10.63  | 11.07  | 10.89  |
| Cl | 0.02  | bdl.  | bdl. | 0.01  | 0.01  | 0.01  | bdl.  | 0.01  | bdl. |
| MnO | 0.52  | 0.59  | 0.67  | 0.74  | 0.72  | 0.50  | 0.44  | 0.58  | 1.04  |
| FeO | 2.95  | 1.98  | 1.97  | 2.14  | 2.01  | 3.69  | 5.72  | 1.81  | 2.55  |
| F | 2.47  | 2.33  | 2.48  | 2.73  | 2.60  | 2.42  | 2.95  | 2.48  | 4.67  |
| Na2O | 0.57  | 0.44  | 0.54  | 0.45  | 0.41  | 0.51  | 0.57  | 0.37  | 0.28  |
| MgO | bdl. | 0.01  | 0.03  | 0.02  | 0.01  | bdl.  | bdl.  | 0.02  | 0.01  |
| Al2O3 | 31.74  | 33.10  | 31.72  | 31.31  | 31.79  | 31.27  | 30.26  | 32.43  | 26.72  |
| Rb2O | 0.69  | 0.58  | 0.65  | 0.70  | 0.66  | 0.66  | 0.80  | 0.56  | 1.14  |
| SiO2 | 44.70  | 45.81  | 45.11  | 45.17  | 45.45  | 44.65  | 43.88  | 44.83  | 46.73  |
| Total | 93.25  | 94.99  | 92.96  | 92.94  | 93.50  | 92.86  | 94.08  | 93.20  | 92.18  |
| Li2O\* | 3.26  | 3.58  | 3.38  | 3.40  | 3.48  | 3.25  | 3.02  | 3.30  | 3.85  |
| Li2O\*计算基于Tischendorf et al. (1997); bdl.-低于检测限 |
| 以24个阴离子为基准计算的阳离子数 |
| Si | 6.30  | 6.30  | 6.34  | 6.33  | 6.33  | 6.32  | 6.21  | 6.28  | 6.45  |
| AlIV | 1.70  | 1.70  | 1.66  | 1.67  | 1.67  | 1.68  | 1.79  | 1.72  | 1.55  |
| T-site | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |
| AlVI | 3.57  | 3.66  | 3.58  | 3.50  | 3.55  | 3.54  | 3.26  | 3.64  | 2.80  |
| Ti |  |  | 0.01  | 0.01  |  |  | 0.01  | 0.01  |  |
| Fe | 0.35  | 0.23  | 0.23  | 0.25  | 0.23  | 0.44  | 0.68  | 0.21  | 0.29  |
| Mn | 0.06  | 0.07  | 0.08  | 0.09  | 0.08  | 0.06  | 0.05  | 0.07  | 0.12  |
| Mg | 0.00  | 0.00  | 0.01  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| Li | 1.85  | 1.98  | 1.91  | 1.91  | 1.95  | 1.85  | 1.72  | 1.86  | 2.14  |
| Y-site | 5.83  | 5.94  | 5.82  | 5.77  | 5.83  | 5.89  | 5.72  | 5.79  | 5.35  |
| Ca |  |  |  |  | 0.01  |  |  |  |  |
| Na | 0.15  | 0.12  | 0.15  | 0.12  | 0.11  | 0.14  | 0.16  | 0.10  | 0.07  |
| K | 1.90  | 1.94  | 1.93  | 1.91  | 1.92  | 1.82  | 1.92  | 1.98  | 1.92  |
| Rb | 0.06  | 0.05  | 0.06  | 0.06  | 0.06  | 0.06  | 0.07  | 0.05  | 0.10  |
| Cs | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.01  |
| X-site | 2.12  | 2.11  | 2.13  | 2.10  | 2.10  | 2.02  | 2.15  | 2.13  | 2.10  |
| F | 1.10  | 1.01  | 1.10  | 1.21  | 1.15  | 1.08  | 1.32  | 1.10  | 2.04  |
| Cl | 0.01  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| OH | 2.89  | 2.99  | 2.90  | 2.79  | 2.85  | 2.91  | 2.68  | 2.90  | 1.96  |
| Z-site | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |