DR2005086

**Table DR1. Sr isotope ratios of Columbia River Basalt Group phenocrysts and groundmass.**

| Formation/Member/Flow | Age (Ma) | Location Latitude | Location Longitude | Composition | Type | $^{87}Sr/^{86}Sr$ | Error (2 SE) | Rb/Sr |
|---|---|---|---|---|---|---|---|---|
| Imnaha Fm. | 16.5 | 45°45' | 116°47' | $An_{70}$-$An_{66}$ | plagioclase rim | **0.704346** | 0.000044 | |
| MgO: 5.0% | | | | | plagioclase | **0.704090** | 0.000038 | |
| $SiO_2$: 50.2% | | | | | plagioclase cor | **0.704037** | 0.000043 | |
| | | | | | plagioclase cor | **0.703956** | 0.000080 | |
| | | | | | plagioclase cor | **0.704004** | 0.000030 | |
| | | | | | plagioclase cor | **0.703946** | 0.000035 | |
| | | | | | plagioclase cor | **0.703969** | 0.000033 | |
| | | | | | plagioclase | **0.704031** | 0.000029 | |
| | | | | | plagioclase rim | **0.704355** | 0.000034 | |
| | | | | | groundmass | **0.704349** | 0.000080 | 0.041 |
| Grande Ronde Fm. | 15.5 | 45° 32' 44" | 116° 47' 51" | $An_{73}$-$An_{68}$ | plagioclase rim | **0.706050** | 0.000032 | |
| MgO: 3.0% | | | | | plagioclase | **0.706024** | 0.000032 | |
| $SiO_2$: 58.4% | | | | | plagioclase cor | **0.706043** | 0.000027 | |
| Flow from magnetostratigraphic unit N1 | | | | | plagioclase cor | **0.706022** | 0.000039 | |
| | | | | | plagioclase cor | **0.706039** | 0.000033 | |
| | | | | | plagioclase cor | **0.706032** | 0.000030 | |
| | | | | | plagioclase cor | **0.706016** | 0.000024 | |
| | | | | | plagioclase | **0.706027** | 0.000033 | |
| | | | | | plagioclase rim | **0.706022** | 0.000034 | |
| | | | | | groundmass | **0.705505** | 0.000012 | 0.183 |
| Wanapum Fm. | 14.3 | 46° 56' 36" | 117° 47' 33" | $An_{70}$-$An_{65}$ | plagioclase rim | **0.705198** | 0.000066 | |
| Roza Member (North) | | | | | plagioclase | **0.705116** | 0.000032 | |
| MgO: 4.6% | | | | | plagioclase cor | **0.704989** | 0.000043 | |
| $SiO_2$: 50.9% | | | | | plagioclase cor | **0.705013** | 0.000038 | |
| | | | | | plagioclase cor | **0.705055** | 0.000046 | |
| | | | | | plagioclase | **0.705120** | 0.000038 | |
| | | | | | plagioclase rim | **0.705186** | 0.000052 | |
| | | | | | groundmass | **0.705310** | 0.000014 | 0.100 |
| Wanapum Fm. | 14.3 | 46° 28' 47" | 117° 24' 33" | $An_{70}$-$An_{65}$ | plagioclase rim | **0.705199** | 0.000026 | |
| Roza Member (South) | | | | | plagioclase cor | **0.705169** | 0.000040 | |
| MgO: 4.2% | | | | | plagioclase cor | **0.705179** | 0.000032 | |
| $SiO_2$: 52.1% | | | | | plagioclase cor | **0.705160** | 0.000028 | |
| | | | | | plagioclase cor | **0.705154** | 0.000024 | |
| | | | | | plagioclase cor | **0.705166** | 0.000030 | |
| | | | | | plagioclase cor | **0.705179** | 0.000037 | |
| | | | | | plagioclase rim | **0.705233** | 0.000025 | |
| | | | | | groundmass | **0.705250** | 0.000010 | 0.066 |
| Saddle Mountains Fm. | 8.5 | 46° 14' 37" | 118° 54' 08" | $An_{70}$ | plagioclase rim | **0.707065** | 0.000065 | |
| Pomona Member | | | | | plagioclase cor | **0.707013** | 0.000058 | |
| MgO: 6.9% | | | | | plagioclase cor | **0.707022** | 0.000054 | |
| $SiO_2$: 51.7% | | | | | plagioclase cor | **0.706987** | 0.000066 | |
| | | | | | plagioclase cor | **0.706987** | 0.000048 | |
| | | | | | plagioclase cor | **0.706992** | 0.000054 | |
| | | | | | plagioclase cor | **0.707048** | 0.000072 | |
| | | | | | plagioclase rim | **0.707087** | 0.000048 | |
| | | | | | groundmass | **0.707711** | 0.000018 | 0.064 |
| Saddle Mountains Fm. | 8.5 | 46° 35' 30" | 119° 08' 20" | $An_{65}$ | plagioclase rim | **0.707853** | 0.000044 | |
| Ice Harbor Member | | | | | plagioclase | **0.707807** | 0.000034 | |
| Basin City Flow | | | | | plagioclase cor | **0.707790** | 0.000041 | |
| MgO: 5.6% | | | | | plagioclase cor | **0.707789** | 0.000039 | |
| $SiO_2$: 46.9% | | | | | plagioclase cor | **0.707770** | 0.000042 | |
| | | | | | plagioclase cor | **0.707785** | 0.000046 | |

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|---|---|---|---|---|---|---|---|
| | | | | plagioclase cor | **0.707783** | 0.000049 | |
| | | | | plagioclase cor | **0.707769** | 0.000044 | |
| | | | | plagioclase cor | **0.707763** | 0.000038 | |
| | | | | plagioclase | **0.707832** | 0.000040 | |
| | | | | plagioclase rim | **0.707826** | 0.000038 | |
| | | | | groundmass | **0.707736** | 0.000018 | 0.031 |
| Saddle Mountains Fm. | 10.5 | 46° 38' 47" 117° 46' 03" | $An_{70}$ | plagioclase rim | **0.712034** | 0.000049 | |
| Elephant Mountain Member | | | | plagioclase | **0.712766** | 0.000036 | |
| MgO: 4.3% | | | | plagioclase cor | **0.712765** | 0.000033 | |
| $SiO_2$: 51.8% | | | | plagioclase cor | **0.712746** | 0.000032 | |
| | | | | plagioclase cor | **0.712715** | 0.000037 | |
| | | | | plagioclase | **0.712704** | 0.000040 | |
| | | | | plagioclase rim | **0.711842** | 0.000051 | |
| | | | | groundmass | **0.713114** | 0.000018 | 0.176 |
| Saddle Mountains Fm. | 6 | 46° 24' 36" 117° 10' 50" | $An_{70}$ | plagioclase rim | **0.709843** | 0.000083 | |
| Lower Monumental Member | | | | plagioclase | **0.709643** | 0.000085 | |
| Tammany Creek Flow | | | | plagioclase cor | **0.709547** | 0.000049 | |
| MgO: 3.8% | | | | plagioclase cor | **0.709501** | 0.000056 | |
| $SiO_2$: 54.6% | | | | clinopyroxene | **0.708325** | 0.000130 | |
| | | | | groundmass | **0.714040** | 0.000106 | 0.170 |

Note: Individual plagioclase phenocrysts are characterized by near homogenous anorthite contents and vary internally by less than 5%. Quoted anorthite contents represent averages of electron microprobe traverses. Groundmass $^{87}Sr/^{86}Sr$ values are age-corrected. The single clinopyroxene $^{87}Sr/^{86}Sr$ value represents the average of four separate laser ablation analyses. Laser ablation analysis accuracy and measurment procedures are discussed by Ramos et al. (2004).