GSA DATA REPOSITORY 2014359 Bons et al.

Crush-Leach and Microthermometry

A Linkam THMSG-600 cooling-heating stage in connection with synthetic fluid inclusion standards was used to conduct microthermometric measurements (Table A1). Samples suitable for crush-leach analysis (c.f. those with only one fluid type) were crushed to a grain size of 0.5 to 1 mm. Each 2 g per sample (fluorite, quartz, calcite) was carefully hand-picked to remove visible impurities, heated in a beaker to 60-70 °C for 3 hours using concentrated HNO_3 and washed twice a day with Milli-Q-water for one week. Subsequently, these samples were hand-crushed to a fine powder and 5 ml acidulated Milli-Q-water (pH ~ 2) was added. These solutions were filtered (CROMAFILE® Xtra RC-20/25) and injected into a Dionex ICS 1000 ion chromatography system at the University of Tübingen equipped with an IonPac AS 9-HC 2 mm column for Cl and Br determination. Detection limits for Cl and Br were at the ppb level and based on the frequent analyses of standard solutions, relative uncertainties are generally ≤15 % (1-sigma level). We checked for possible contamination by performing blank runs.

TABLE DR1. CRUSH-LEACH AND MICROTHERMOMETRY DATA

Sample	latitude*	longitude*	location	gangue mineral	Salinity ($NaCl+CaCl_2$)	Cl/Br mass ratio
F15	47.664267	7.923798	Wehratal	fluorite	21.5 ± 0.5	237±53
F16	47.683817	8.253700	Nöggenschwiel	fluorite	25.7 ± 0.4	117±35
GS28a	47.722646	8.120855	Schwarzwaldsegen	fluorite	22.7 ± 0.5	103±31
42Fl	47.757750	8.279599	Igelschlatt	fluorite	23.2 ± 0.5	300±90
BW32	47.757750	8.279599	Igelschlatt	fluorite	23.2 ± 0.5	161±48
ML-23	47.757750	8.279599	Igelschlatt	fluorite	23.2 ± 0.5	267±80
BW-22	47.832544	7.903407	Finstergrund	fluorite	25.5 ± 0.3	372±112
ML-19	47.832544	7.903407	Finstergrund	fluorite	25.5 ± 0.3	423±127
BW178	47.832544	7.903407	Finstergrund	fluorite	25.5 ± 0.3	170±51
ML-37	47.830915	7.819548	Herrenwald	quartz	24.6 ± 5.0	185±55
ML-13	47.909642	7.898767	Schauinsland	quartz	24.6 ± 0.3	118±35
GS92	47.7414435	8.232401	Brenden	fluorite	22.9 ± 1.3	268±80
24Fl	47.7414435	8.232401	Brenden	fluorite	22.9 ± 1.3	569±171
BO90	47.859206	7.743900	Wonnen Nord	quartz	23.9 ± 1.5	117±35
BW9	47.751106	8.108111	Neue Hoffnung Gottes	fluorite	22.1 ± 1.0	117±35
ML-25	47.841301	7.972786	Brandenberg	fluorite	23.0 ± 1.0	132±40
GS111F	47.841301	7.972786	Brandenberg	fluorite	23.0 ± 1.0	133±40
GS111Q	47.841301	7.972786	Brandenberg	quartz	22.9 ± 1.0	151±45
GS111	47.841301	7.972786	Brandenberg	fluorite	23.0 ± 1.0	131±39
GS83	47.841301	7.972786	Brandenberg	fluorite	23.0 ± 1.0	296±89
BW56	47.841301	7.972786	Waldschweine	fluorite	20.1 ± 2.5	177±53
FP19	47.793183	7.798217	Nonnenmattweiher	fluorite	24.0 ± 0.4	85±26
FP19	47.792210	7.796888	Nonnenmattweiher	fluorite	24.0 ± 0.4	59±18
ML42	47.724685	8.120925	Gottesehre Urberg	calcite	19.8 ± 3.2	142±43

* UTM coordinates zones 32U and 32T. WGS84