TABLE 1. Starting materials and experimental run conditions for chlorine solubility experiments

Experiment Number[a]	P (bars)	T (°C)	Starting Material Bulk Composition	Chlorides Added to Starting Charge	Hydrogen Pressure Applied[b]	Run Duration (hrs).	Run-Product Phases[c]
1atm-96-3A	ca. 1[d]	1160	andesite	NaCl, KCl	≈ 0.69 bars	184	s, g, c, p, FeTi
1atm-96-3B	ca. 1[d]	1160	andesite	NaCl, KCl	≈ 0.69 bars	184	s, g, p, FeTi
1atm-96-3C	ca. 1[d]	1160	latite	NaCl, KCl	≈ 0.69 bars	184	s, g
1atm-97-2A	ca. 1[d]	1045	topaz rhyolite	NaCl, KCl	≈ 0.69 bars	136	s, g
1atm-95-1A	ca. 1[d]	1055	granite	NaCl, KCl	≈ 0.69 bars	157	s, g
1atm-95-1C	ca. 1[d]	1055	granite	NaCl, KCl	≈ 0.69 bars	157	s, g
1atm-95-3H	ca. 1[d]	1055	granite	NaCl, KCl	≈ 0.69 bars	140	s, g
1atm-95-4	ca. 1[c]	1050	granite	NaCl, KCl	≈ 0.69 bars	279	s, g
1atm-96-2B	ca. 1[d]	1075	haplogranite	NaCl, KCl	≈ 0.69 bars	182	s, g
1atm-96-2C	ca. 1[d]	1075	topaz rhyolite	NaCl, KCl	≈ 0.69 bars	182	s, g, p, FeTi
1atm-96-2A	265	1075	latite	NaCl, KCl	≈ 0.69 bars	182	s, g, p, FeTi
CS-13-18A	265	700	granite	NaCl, KCl	≈ 0.69 bars	*455*	s,g,p,q,ft
CS-13-18B	483	700	granite	NaCl, KCl	≈ 0.69 bars	*455*	s,g,p,q,ft
1-12-16A	483	1135	andesite	$PtCl_2$	≈ 0.69 bars	290	s, g, p, FeTi
1-12-16B	483	1135	phonotephrite	$PtCl_2$	≈ 0.69 bars	290	s, g
1-12-16C	500	1135	dacite	$PtCl_2$	≈ 0.69 bars	290	s, g
1-02-12A	500	1001	phonolite	NaCl, KCl	≈ 0.69 bars	168	s, g
1-02-19A	500	1000	phonolite	NaCl, KCl	≈ 0.69 bars	115	s, g, FeTi
1-02-12C	500	1001	phonolite, H_2O	NaCl, KCl	≈ 0.69 bars	168	s, g, FeTi
1-99-3A	500	1122	phonotephrite	NaCl, KCl, $FeCl_2{\cdot}4H_2O$	≈ 0.69 bars	98	s, g

1-95-10D	500	910	topaz rhyolite, H_2O	NaCl, KCl	≈ 0.69 bars	268	s, g
1-95-10G	500	930	topaz rhyolite	NaCl, KCl	≈ 0.69 bars	257	s, g
1-09-14C	500	909	rhyodacite, H_2O, H_3PO_4, NaF, apatite	$CaCl_2 \cdot 2H_2O$	≈ 0.69 bars	386	s, g, a, p, c, FeTi
1-09-15B	500	900	rhyodacite, H_2O, H_3PO_4, NaF, apatite	$CaCl_2 \cdot 2H_2O$, NaCl, KCl, HCl	≈ 0.69 bars	525	s, g, a, p, c, FeTi
1-09-15C	500	900	rhyodacite, H_2O, H_3PO_4, NaF, apatite	$CaCl_2 \cdot 2H_2O$, NaCl, KCl, HCl	≈ 0.69 bars	525	s, g, a, p, c, FeTi
1-95-9E	500	931	granite, H_2O	NaCl, KCl	≈ 0.69 bars	*142*	s, g
1-95-9A	500	931	granite	NaCl, KCl	≈ 0.69 bars	*142*	s, g
1-95-9B	500	931	granite	NaCl, KCl	≈ 0.69 bars	*142*	s, g
1-95-9C	500	931	granite, H_2O	NaCl, KCl	≈ 0.69 bars	*142*	s, g
1-95-9G	507	931	granite	NaCl, KCl	≈ 0.69 bars	*142*	s, g
1-09-16A	507	1122	rhyodacite, H_2O	$CaCl_2 \cdot 2H_2O$	≈ 0.69 bars	168	s, g
1-09-16D	510	1122	rhyodacite	NaCl, $CaCl_2 \cdot 2H_2O$	≈ 0.69 bars	168	s, g
1-94-22D	510	1065	haplogranite	NaCl, KCl	≈ 0.69 bars	*499*	s, g
1-94-22A	510	1065	haplogranite	NaCl, KCl	≈ 0.69 bars	*499*	s, g
1-94-22C	510	1065	haplogranite	NaCl, KCl	≈ 0.69 bars	*499*	s, g
1-94-22B	510	1065	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	*499*	s, g
1-94-22E	550	1065	haplogranite	NaCl, KCl	≈ 0.69 bars	*499*	s, g
1-94-23D	550	860	haplogranite	NaCl, KCl	≈ 0.69 bars	*452*	s, g, q
1-94-23F	550	860	haplogranite	NaCl, KCl	≈ 0.69 bars	*452*	s, g, q
1-94-23H	550	860	haplogranite	NaCl, KCl	≈ 0.69 bars	*452*	s, g, q
1-94-23C	550	860	haplogranite	NaCl, KCl	≈ 0.69 bars	*452*	s, g, q
1-94-23B	1000	860	haplogranite	NaCl, KCl	≈ 0.69 bars	*452*	s, g

2012-H5-6	1000	1250	basalt	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H5-4	1000	1250	andesite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H5-2	1000	1250	phonolite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H5-5	1000	1250	rhyolite	$PtCl_4$, NaCl, KCl	≈ 0.69 bars	72	s, g
2012-H5-1	1000	1250	phonotephrite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H5-3	1000	1250	dacite	$PtCl_4$	≈ 0.69 bars	72	s, g
1-95-12E	1000	1060	granite	NaCl, KCl	≈ 0.69 bars	308	s, g
1-95-12B	1000	1060	granite	NaCl, KCl	≈ 0.69 bars	308	s, g
1-97-3A	1000	965	haplogranite	NaCl, KCl	≈ 0.69 bars	258	s, g
1-97-3C	1450	965	haplogranite	NaCl, KCl	≈ 0.69 bars	258	s, g
1-99-1B	1500	985	andesite, H_2O	$FeCl_2{\cdot}4H_2O$	29 bars	213	s, g, p, c, FeTi
1-00-18A	1500	1160	anorthite-diopside mix	$CaCl_2$, $MgCl_2$	≈ 0.69 bars	142	s, g
1-00-18B	1500	1160	anorthite-diopside mix	$CaCl_2$, $MgCl_2$	≈ 0.69 bars	142	s, g
1-00-23A	1500	1158	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	165	s, g
1-00-23B	1500	1158	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	165	s, g
1-00-23C	1500	1158	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	165	s, g
1-00-23D	1500	1158	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	165	s, g
1-00-23E	1500	1158	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	165	s, g
1-00-28A	1500	1100	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	138	s, g
1-00-28B	1500	1100	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	138	s, g
1-00-28C	1500	1100	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	138	s, g
1-00-28D	1500	1100	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	138	s, g
1-00-28F	1500	1100	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	138	s g
1-01-35B	1500	1050	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	140	s, g

1-01-35C	1980	1050	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	140	s, g
1-07-13A	1980	990	rhyodacite, H_2O, apatite, Fe_3O_4	NaCl, KCl	≈ 0.69 bars	648	s, g, a
1-07-13B	2000	990	rhyodacite, H_2O, apatite, Fe_3O_4	NaCl, KCl	≈ 0.69 bars	648	s, g, a
1-00-32B	2000	1151	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	211	s, g
1-00-32C	2000	1151	anorthite-diopside mix	$PtCl_2$	≈ 0.69 bars	211	s, g
1-02-11A	2000	997	phonolite	NaCl, KCl	≈ 0.69 bars	190	s, g, a, p, c, FeTi
1-07-05[e]	2000	903	phonolite, H_2O, CO_2	NaCl, KCl, $C_2H_2O_4{\cdot}2H_2O$	≈ 0.69 bars	*245*	s, g
1-07-06[f]	2000	901	phonolite, H_2O, CO_2	NaCl, KCl, $C_2H_2O_4{\cdot}2H_2O$	≈ 0.69 bars	*263*	s, g
1-94-17A	2000	972	F-rich topaz rhyolite	NaCl, KCl	≈ 0.69 bars	*163*	s, g
1-94-17B	2000	972	topaz rhyolite	NaCl, KCl	≈ 0.69 bars	*163*	s, g
1-10-07A[g]	2000	900	haplogranite, H_2O, CO_2, S	NaCl, KCl, $C_2H_2O_4{\cdot}2H_2O$	≈ 0.69 bars	*602*	s, g
1-96-13E[h]	2000	950	haplogranite, H_2O, CO_2	NaCl, KCl, $C_2H_2O_4{\cdot}2H_2O$	≈ 0.69 bars	*195*	s, g
1-96-13D	2010	950	haplogranite	NaCl, KCl	≈ 0.69 bars	*195*	s, g
1-99-15	2020	1100	basalt, H_2O, H_3PO_4, apatite	NaCl, KCl, $FeCl_2{\cdot}4H_2O$, $CaCl_2{\cdot}2H_2O$	36 bars	136	s, g, a, o, FeTi
1-94-1D	2030	703	topaz rhyolite	NaCl, KCl	≈ 0.69 bars	187	s, g
1-03-09B	2040	958	phonolite	$CaCl_2{\cdot}2H_2O$	≈ 0.69 bars	240	s, g
1-99-12	2000	1104	basalt, H_2O, H_3PO_4, apatite	NaCl, KCl, $FeCl_2{\cdot}4H_2O$	38 bars	117	s, g, a, o, FeTi
1-00-19B	3010	1075	basalt, apatite, Fe_3O_4	$FeCl_2{\cdot}4H_2O$, $CaCl_2{\cdot}2H_2O$	15 bars	138	s, g, a, c, o, FeTi
1-96-1B	3010	1015	haplogranite	NaCl, KCl	≈ 0.69 bars	132	s, g
1-96-1E	3010	1015	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	132	s, g
1-96-1D	3010	1015	haplogranite	NaCl, KCl	≈ 0.69 bars	132	s, g
1-96-1F	3010	1015	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	132	s, g
1-96-1A	3010	1015	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	132	s, g

1-96-1C	3000	1015	haplogranite	NaCl, KCl	≈ 0.69 bars	132	s, g
2012-H2-1	3000	1250	phonolite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H2-2	3000	1250	andesite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H2-3	3000	1250	basalt	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H2-4	3000	1250	phonotephrite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H2-5	3000	1250	dacite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H2-6	3940	1250	rhyolite	$PtCl_4$, NaCl, KCl	≈ 0.69 bars	72	s, g
1-95-8B	4000	843	haplogranite	NaCl, KCl	≈ 0.69 bars	305	s, g
1-96-5A	4000	950	haplogranite	NaCl, KCl	≈ 0.69 bars	*286*	s, g
1-96-5E	4000	950	albite-quartz	NaCl	≈ 0.69 bars	*286*	s, g
1-96-5F	4070	950	orthoclase-quartz	KCl	≈ 0.69 bars	*286*	s, g
1-95-11A	4070	1047	haplogranite	NaCl, KCl	≈ 0.69 bars	*239*	s, g
1-95-11E2	4070	1047	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	*239*	s, g
1-95-11E	4070	1047	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	*239*	s, g
1-95-11B2	4470	1047	haplogranite, H_2O	NaCl, KCl	≈ 0.69 bars	*239*	s, g
1-97-10A	4470	1058	haplogranite	NaCl, KCl	≈ 0.69 bars	121	s, g
1-97-10B	4470	1058	haplogranite	NaCl, KCl	≈ 0.69 bars	121	s, g
1-97-10C	5000	1058	latite	NaCl, KCl	≈ 0.69 bars	121	s, g
2012-H1-1	5000	1250	basalt	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H1-2	5000	1250	andesite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H1-3	5000	1250	phonolite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H1-5	5000	1250	phonotephrite	$PtCl_4$	≈ 0.69 bars	72	s, g
2012-H1-4	5000	1250	rhyolite	$PtCl_4$, NaCl, KCl	≈ 0.69 bars	72	s, g
2012-H3-1	5000	1050	phonolite	$PtCl_4$	≈ 0.69 bars	120	s, g

2012-H3-2	5000	1050	dacite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H3-3	5000	1050	rhyolite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H3-4	7000	1050	rhyolite	NaCl, KCl	≈ 0.69 bars	120	s, g
2012-H4-2	7000	1250	phonotephrite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H4-3	7000	1250	dacite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H4-4	7000	1250	phonolite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H4-5	7000	1250	andesite	$PtCl_4$	≈ 0.69 bars	120	s, g
2012-H4-6	7000	1250	rhyolite	$PtCl_4$, NaCl, KCl	≈ 0.69 bars	120	s, g

[a]Runs with 2012-Hx-x designation conducted at the University of Hannover, Germany; all other runs conducted at American Museum of Natural History.

[b]H_2 pressure applied during run. The ca. 0.69 bars value is ambient IHPV pressure; higher pressures were applied by Shaw membrane.

[c]Phases in run products: s=salts, g= vesicular glass, q=quartz, p=plagioclase, c=clinopyroxene, o=orthopyroxene, FeTi=iron titanium oxides.

[d]Runs at ca. 1-bar pressure conducted at ambient pressure in sealed precious metal capsules that may have contained internal pressures marginally 1 atm.

[e]Hydrosaline liquid composition computed (with mass balance) to contain ca. 16 wt% CO_2, 22 wt% Cl, 41 wt% H_2O, and 21 wt% cations at run conditions.

[f]Hydrosaline liquid composition computed (with mass balance) to contain ca. 8 wt% CO_2, 16 wt% Cl, 61 wt% H_2O, and 15 wt% cations at run conditions

[g]Hydrosaline liquid composition computed (with mass balance) to contain ca. 2 wt% S, 17 wt% Cl, 21 wt% CO_2, 45 wt% H_2O, and 15 wt% cation at run conditions

[h]Hydrosaline liquid composition computed (with mass balance) to contain ca. 8 wt% H_2O, 21 wt% CO_2, 36 wt% Cl, 35 wt% cations at run conditions.