

Appendix 2-11 Homogenization Temperatures of the Fluid Inclusions(1)~(3)



Appendix 2-11 HOMOGENIZATION TEMPERATURE OF FLUID INCLUSIONS (1)

No.	SAMPLE No.	LOCALITY			ROCK NAME	MEASURED MINERAL	NUM-BER	RANGE (°C)	MEAN OF SAMPLE (°C)	STANDARD DEVIATION	REMARKS	
		AREA	NAME	LONGITUDE								LATITUDE
1	0A62502			104° 9' 11.91"	44° 22' 49.08"	qz-cal v				No inclusions		
2	0A62702			104° 8' 36.34"	44° 23' 7.74"	sil zone + qz cal v				No inclusions		
3	0A63002			104° 10' 6.41"	44° 22' 57.1"	ch-qz v	14	152 - 318	275	39	No inclusions	
4	0A70101	OLON OV00T		104° 10' 25.46"	44° 22' 43.87"	cal-qz v	23	173 - 307	257	37		
5	0A70204	Semidetalled Survey Area		104° 10' 47.78"	44° 22' 4.52"	qz v	24	202 - 345	284	44		
6	0A70301			104° 11' 4.55"	44° 22' 33.55"	sil zone + qz v				No inclusions		
7	0A62801			104° 9' 40.45"	44° 22' 58.77"	milky wht v qz				No inclusions		
8	0S62603			104° 9' 36.82"	44° 23' 11.29"	milky wht v qz	14	195 - 262	218	21		
9	0S62402			104° 10' 57.27"	44° 21' 59.04"	milky wht v qz	10	178 - 347	291	51		
10	0S70301			104° 10' 53"	44° 23' 00"	milky wht v qz				No inclusions		
11	0S70401			104° 10' 33.18"	44° 21' 38.04"	qz netw in sil ss	3	172 - 245	216	31		
12	0034225			104° 9' 29.09"	44° 22' 20.65"	milky wht v qz	3	172 - 199	184	11		
13	0084030			104° 9' 31.36"	44° 22' 26.13"	milky wht v qz	4	238 - 284	261	22		
14	0143750			104° 9' 35"	44° 22' 25.8"	milky wht v qz	5	213 - 256	235	19		
15	0292050			104° 9' 40.91"	44° 22' 20.65"	milky wht v qz	3	148 - 199	172	21		
16	0300775			104° 9' 42.73"	44° 22' 17.1"	milky wht v qz	15	200 - 323	270	45		
17	0301950			104° 9' 41.82"	44° 22' 20.55"	milky wht v qz	11	203 - 298	256	25	No inclusions	
18	0302100			104° 9' 42"	44° 22' 21"	milky wht v qz				No inclusions		
19	0341980			104° 9' 44.55"	44° 22' 20.65"	milky wht v qz	6	150 - 189	169	12		
20	0351175	OLON OV00T		104° 9' 46.36"	44° 22' 19.03"	milky wht v qz	11	174 - 271	218	24		
21	0462525	Geochemical		104° 9' 49"	44° 22' 24"	milky wht v qz				No inclusions		
22	0472400	Survey Area		104° 9' 50"	44° 22' 23.23"	milky wht v qz				No inclusions		
23	0572300			104° 9' 55"	44° 22' 23"	milky wht v qz	3	168 - 172	170	2		
24	0622400			104° 9' 57"	44° 22' 23"	milky wht v qz				No inclusions		
25	0674570			104° 9' 58.18"	44° 22' 30.32"	milky wht v qz	3	234 - 285	253	23		
26	0832190			104° 10' 4.78"	44° 22' 26.45"	milky wht v qz	2	240 - 269	255	15		
27	0913500			104° 10' 8"	44° 22' 27"	milky wht v qz				No inclusions		
28	0924300			104° 10' 9.09"	44° 22' 29.58"	milky wht v qz	9	205 - 352	306	55		
29	0943230			104° 10' 10.45"	44° 22' 26.13"	milky wht v qz	8	260 - 356	316	36		
30	0954375			104° 10' 10.91"	44° 22' 30.32"	milky wht v qz	8	222 - 320	280	28		
31	0984500			104° 10' 12.27"	44° 22' 30.65"	milky wht v qz	2	169 - 172	171	2		
32	0S70409			104° 8' 9"	44° 23' 18"	milky wht csg mono qz				No inclusions		
33	0S70504			104° 7' 55"	44° 23' 14"	milky wht csg mono qz				No inclusions		
34	0S70510			104° 7' 43"	44° 23' 18"	grn copper bearing v qz	6	102 - 128	115	8		
35	0S70514	OLON OV00T		104° 7' 43"	44° 23' 18"	tour-qz v				No inclusions		
36	0S80501	Recomalissa-		104° 8' 9"	44° 23' 18"	milky wht v qz	13	151 - 323	233	53		
37	0S80504	nce Survey		104° 8' 39"	44° 23' 18"	milky wht mono v qz	1	252 - 262	262	0		
38	XS80501	Area	1	Horimi Hodag	104° 5' 30"	44° 20' 56"	milky wht mono v qz	12	189 - 282	214	12	
39	XS80504		1	Horimi Hodag	104° 5' 39"	44° 20' 57"	milky wht mono v qz	6	138 - 175	147	13	
40	XS80505		1	Horimi Hodag	104° 6' 45"	44° 20' 56"	milky wht mono v qz	7	139 - 188	164	17	
41	US81105			104° 22' 39"	44° 26' 11"	milky wht mono v qz	23	228 - 368	285	35		
42	FB1501	Tsagaan Uula	10	104° 35' 44"	44° 53' 18"	wht v qz / brec sch				No inclusions		
43	FB1502	Tsagaan Uula	10	104° 38' 32.16"	44° 53' 39.91"	wht v qz / lmc	7	98 - 150	118	18		
44	FB1504	Tsagaan Uula	11	104° 50' 41.05"	44° 55' 4.32"	tour-qz tour gn sph cp	14	259 - 298	276	12		

\*Number of Oreshowing

Appendix 2-11 HOMOGENIZATION TEMPERATURE OF FLUID INCLUSIONS (2)

No.	SAMPLE No.	LOCALITY			ROCK NAME	MEASURED MINERAL	NUM-BER	RANGE (°C)	MEAN OF SAMPLE (°C)	STANDARD DEVIATION	REMARKS
		AREA	NAME	LONGITUDE							
45	DR80601	DUGSHIH		104° 39' 51"	44° 22' 52"	wht msv v qz, ser	11	130 — 292	196	56	
46	DR80603	DUGSHIH		104° 37' 54.12"	44° 24' 22.18"	wht v qz suif morph	20	101 — 301	182	56	
47	DR80604	DUGSHIH		104° 58' 5.1"	44° 24' 34.05"	milky wht qz/limo	21	162 — 343	252	54	
48	DR80605	DUGSHIH		104° 57' 13.12"	44° 24' 19.44"	milky wht qz/limo	13	142 — 204	174	18	
49	DR80703	DUGSHIH		104° 56' 0.76"	44° 24' 22.96"	milky wht qz/limo	12	192 — 255	172	44	
50	DR80705	DUGSHIH		104° 55' 49.66"	44° 24' 22.99"	milky wht qz/limo	22	139 — 354	249	64	
51	DS80719	DUGSHIH		104° 55' 49.66"	44° 24' 26"	milky wht v qz	16	172 — 380	248	69	
52	NS80704	DUGSHIH		104° 52' 50.74"	44° 22' 9.19"	milky wht v qz clean	6	151 — 329	238	51	
53	SR80701	DUGSHIH		104° 56' 2.57"	44° 23' 0.71"	milky wht v qz		—		No inclusions	
54	SR80702	DUGSHIH		104° 54' 56.92"	44° 23' 34.76"	milky wht v qz/limo	8	129 — 289	195	58	
55	HR80702	DUGSHIH		104° 54' 56.92"	44° 23' 34.76"	milky wht v qz, py morph	18	154 — 325	243	18	
56	HR80703	DUGSHIH		104° 0' 59.19"	44° 24' 8.49"	wht v qz, clean	23	149 — 392	251	57	
57	HR80802	DUGSHIH		104° 53' 15.9"	44° 24' 28.42"	limo banded wht v qz	12	120 — 320	203	55	
58	HR80805	DUGSHIH		104° 53' 25.98"	44° 24' 22.76"	limo banded wht v qz	15	139 — 362	252	57	
59	ES80809	DUGSHIH		104° 53' 15.9"	44° 24' 29.42"	milky wht v qz	5	292 — 252	230	22	
60	HR80903	DUGSHIH		105° 0' 9.23"	44° 22' 1.01"	wht v qz, clean	15	139 — 319	212	40	
61	DR80801	DUGSHIH		104° 46' 51.38"	44° 30' 46.34"	wht v qz, drusy, limo	17	110 — 262	199	41	
62	DR80803	DUGSHIH		104° 46' 15.85"	44° 30' 29.91"	limo brn sil rock		—		No inclusions	
63	HR1003	ONE		105° 22' 12.25"	44° 36' 32.43"	wht v qz, limo	12	221 — 340	278	42	
64	HR1006	ONE		105° 20' 49.09"	44° 36' 1.85"	wht v qz	12	162 — 250	217	30	
65	HR1007	ONE		105° 20' 49.67"	44° 36' 14.04"	wht v qz, limo blk subs	1	148 — 148	148	0	
66	HR1008	ONE		105° 20' 8.34"	44° 38' 44.63"	wht v qz, limo blk subs	22	145 — 195	173	14	
67	HR1010	ONE		105° 20' 49.27"	44° 39' 8.37"	wht v qz, little limo	10	226 — 282	247	15	
68	OS81014	ONE		105° 17' 12.99"	44° 39' 22.51"	milky wht v qz	20	142 — 280	183	42	
69	HR1012	ONE		105° 17' 26.08"	44° 40' 45.87"	wht v qz, limo blk subs	10	182 — 305	257	42	
70	HR1701	SOIRIG		105° 43' 32.74"	45° 38' 43.63"	sil r./qz netw		—		No inclusions	
71	HR1702	SOIRIG		105° 43' 41.96"	45° 38' 45.95"	blk porous sil r.		—		No inclusions	
72	HR1707	SOIRIG		105° 44' 19.48"	45° 38' 45.16"	milky wht v qz	11	119 — 155	135	14	
73	HR1708	SOIRIG		105° 44' 1.46"	45° 38' 35.87"	wht v qz, py morph	8	135 — 142	139	2	
74	HR1710	SOIRIG		105° 41' 29.74"	45° 34' 36.94"	gry-wht v qz, py morph	14	122 — 202	153	21	
75	HR1711	SOIRIG		105° 52' 47.18"	45° 49' 53.28"	red-wht-grn tint v qz	22	149 — 205	173	15	
76	HR1712	SOIRIG		105° 52' 46.48"	45° 49' 54.2"	red-wht tint v qz, limo	12	167 — 186	177	5	
77	HR1714	SOIRIG		105° 52' 41.75"	45° 49' 56.73"	wht v qz, limo netw	13	146 — 180	158	8	
78	HR1715	SOIRIG		105° 52' 46.59"	45° 50' 9.18"	red-grn tint wht v qz	3	142 — 152	147	4	
79	HR1802	SOIRIG		105° 53' 3.78"	45° 50' 33.44"	red-gry sil r./qz netw	4	124 — 148	135	9	
80	HR1803	SOIRIG		105° 53' 10.87"	45° 50' 10.06"	wht sil r./qz netw	15	138 — 205	163	21	
81	HR1804	SOIRIG		105° 53' 58.67"	45° 52' 2.44"	wht sil r./qz netw		—		No inclusions	
82	HR2702	NORTH HARMAGTAL		105° 54' 33.7"	44° 28' 52.18"	wht esg v qz, part limo	15	162 — 229	185	15	
83	HR2703	NORTH HARMAGTAL		105° 55' 22.14"	44° 28' 46.17"	wht esg v qz, part limo	12	182 — 209	197	12	
84	SR2708	NORTH HARMAGTAL	125	106° 8' 42.82"	44° 42' 17.37"	wht esg v qz, drusy	28	195 — 263	206	28	
85	HR3108	NORTH HARMAGTAL		105° 42' 11.09"	44° 25' 56.77"	wht semitrans v qz dr		—		No inclusions	
86	HR3110	NORTH HARMAGTAL	110	105° 43' 13.85"	44° 25' 53.84"	wht semitrans v qz, dr	18	140 — 200	168	13	
87	HR3111	NORTH HARMAGTAL	110	105° 43' 31.56"	44° 25' 45.54"	wht semitrans v qz, limo	14	134 — 166	155	14	
88	HR3112	NORTH HARMAGTAL	114	105° 46' 47"	44° 25' 26.23"	wht semitrans v qz	16	152 — 199	175	16	

\*Number of Oreshowing

Appendix 2-11 HOMOGENIZATION TEMPERATURE OF FLUID INCLUSIONS (3)

No.	SAMPLE No.	LOCALITY			ROCK NAME	MEASURED MINERAL	NUMBER BER	RANGE (°C)	MEAN OF SAMPLE (°C)	STANDARD DEVIATION	REMARKS		
		AREA	No. #	NAME									
89	H83113	NORTH HARMAGTAL	93		105° 48' 23.99"	44° 25' 32.24"	wht semitrans v qz limo	Quartz	21	156 — 196	173	10	
90	H83115	NORTH HARMAGTAL	119		105° 53' 2.05"	44° 25' 35.12"	wht semitrans v qz limo	Quartz	20	142 — 192	173	12	
91	H83116	NORTH HARMAGTAL	121		105° 53' 42.65"	44° 25' 28.32"	wht semitrans v qz limo	Quartz	22	148 — 198	183	12	
92	H83102	NORTH HARMAGTAL	104		105° 59' 36.58"	44° 27' 34.32"	wht semitrans v qz limo	Quartz	5	138 — 262	226	49	
93	H83101	NORTH HARMAGTAL	102		106° 2' 28.77"	44° 26' 58.19"	wht csg clean v qz	Quartz	9	190 — 221	211	9	
94	H83019	NORTH HARMAGTAL	125		106° 8' 57.56"	44° 24' 58.88"	wht-ry semitrans v qz	Quartz	13	171 — 213	190	14	
95	H83014	NORTH HARMAGTAL	127		106° 9' 53.84"	44° 26' 55.05"	wht semitrans csg v qz	Quartz	12	149 — 204	181	13	
96	H83010	NORTH HARMAGTAL	132		106° 12' 19.74"	44° 27' 4.78"	wht csg v qz limo py	Quartz	11	170 — 202	181	10	
97	H83007	NORTH HARMAGTAL	134		106° 10' 45.34"	44° 28' 0.27"	wht csg clean v qz	Quartz	2	244 — 258	251	7	
98	H83009	NORTH HARMAGTAL	133		106° 12' 42.47"	44° 27' 8.44"	wht csg dr v qz blk sub	Quartz	3	184 — 258	227	24	No inclusions
99	H83004	NORTH HARMAGTAL			106° 18' 15.27"	44° 27' 30.92"	wht csg v qz limo py	Quartz	3	207 — 250	231	18	
100	H83002	NORTH HARMAGTAL	137		106° 13' 20.67"	44° 27' 11.65"	wht csg clean v qz	Quartz	6	217 — 275	238	26	
101	H82916	NORTH HARMAGTAL	138		106° 13' 56.83"	44° 27' 17.14"	wht semitrans csg v qz	Quartz	6	217 — 275	238	26	No inclusions
102	H82915	NORTH HARMAGTAL			106° 14' 10.56"	44° 27' 18.77"	wht semitrans csg v qz	Quartz	6	217 — 275	238	26	No inclusions
103	H82914	NORTH HARMAGTAL			106° 14' 32.31"	44° 27' 17.15"	wht v qz limo band	Quartz	3	161 — 167	163	3	No inclusions
104	H82911	NORTH HARMAGTAL			106° 15' 22.58"	44° 27' 10.73"	wht clean csg v qz	Quartz	7	138 — 195	160	23	No inclusions
105	H82903	NORTH HARMAGTAL	101		106° 45' 7.25"	44° 28' 26.75"	wht semitrans v qz gn	Quartz	2	101 — 160	134	33	
106	H82001	SOLOGOI	57		106° 51' 59.02"	45° 31' 58.79"	drk brnf sil r part bree	Quartz	14	129 — 140	134	3	No inclusions
107	H82002	SOLOGOI	57		106° 51' 30.75"	45° 31' 42.55"	red-brn sil r	Quartz	2	136 — 146	141	5	No inclusions
108	H82003	SOLOGOI	57	Dersen	106° 50' 32.35"	45° 31' 19.93"	wht v qz, partly limo	Quartz	3	161 — 167	163	3	No inclusions
109	H82004	SOLOGOI	57	Us	106° 50' 15.48"	45° 30' 28"	drk gry-wht sil r	Quartz	3	161 — 167	163	3	No inclusions
110	H82006	SOLOGOI	57	Hudak	106° 50' 26.99"	45° 30' 8.31"	blk-brn msy sil r bree	Quartz	7	138 — 195	160	23	No inclusions
111	H82007	SOLOGOI	57		106° 50' 27.57"	45° 29' 46.41"	wht msy clean v qz	Quartz	7	138 — 195	160	23	No inclusions
112	H82008	SOLOGOI	57		106° 50' 27.62"	45° 29' 38.66"	drk-light gry sil r	Quartz	14	129 — 140	134	3	No inclusions
113	H82101	SOLOGOI	60		106° 59' 29.16"	45° 22' 32.48"	wht clean sil r	Quartz	14	129 — 140	134	3	No inclusions
114	H82103	SOLOGOI	60		106° 58' 43.21"	45° 21' 55.48"	brn-red tint wht v qz	Quartz	7	132 — 192	153	24	No inclusions
115	H82104	SOLOGOI	60		106° 58' 21.53"	45° 21' 48.19"	yel-brn wht v qz	Quartz	6	115 — 139	127	8	No inclusions
116	H82107	SOLOGOI	60		106° 57' 27.86"	45° 21' 30.05"	wht v qz limo band py	Quartz	1	209 — 209	209	0	No inclusions
117	H82108	SOLOGOI	60		106° 57' 19.11"	45° 21' 27.44"	wht v qz limo band py	Quartz	13	150 — 192	161	11	No inclusions
118	H82110	SOLOGOI	60		106° 56' 57.08"	45° 21' 20.13"	wht v qz limo aft sulf	Quartz	11	135 — 161	149	7	No inclusions
119	H82111	SOLOGOI	60		106° 56' 37.68"	45° 21' 15.35"	wht v qz limo aft sulf	Quartz	11	135 — 161	149	7	No inclusions
120	H82310	SOLOGOI	63		106° 36' 30.32"	45° 10' 47.6"	wht v qz limo netw py	Quartz	14	142 — 179	156	10	No inclusions
121	H82406	SOLOGOI	63		106° 37' 24.2"	45° 10' 34.25"	red-gry semitrans v qz	Quartz	17	180 — 237	201	15	No inclusions
122	H82408	SOLOGOI	63		106° 37' 37.23"	45° 10' 20.72"	wht v qz limo brn cu	Quartz	17	180 — 237	201	15	No inclusions
123	H82411	SOLOGOI	64		106° 38' 47.48"	45° 10' 24.27"	wht clean v qz py mosp	Fluorite	17	140 — 177	162	13	No inclusions
124	H82301	SOLOGOI	64		106° 44' 24.82"	45° 17' 5.37"	red-brn chal qz fluor	Quartz	15	210 — 260	248	16	No inclusions
125	H82302	SOLOGOI	61		106° 41' 38.59"	45° 16' 13.25"	light gry semitrans v qz	Quartz	8	119 — 133	124	6	No inclusions
126	H82304	SOLOGOI	61		106° 40' 16.59"	45° 16' 14.38"	wht v qz limo netw	Quartz	15	210 — 260	248	16	No inclusions
127	H82204	SOLOGOI	65		106° 54' 20.44"	45° 5' 50.97"	drk gry wht sil r	Quartz	8	119 — 133	124	6	No inclusions
128	H82205	SOLOGOI	65		106° 54' 24.81"	45° 6' 13.35"	red-vel sil sint/q vlet	Quartz	8	119 — 133	124	6	No inclusions
129	H82402	SOLOGOI	65		106° 54' 2.74"	45° 6' 6.72"	gry sil ls	Quartz	8	119 — 133	124	6	No inclusions
130	H82211	SOLOGOI	65		106° 45' 5.19"	45° 10' 44.09"	gry por sil r/qz vlet	Quartz	8	119 — 133	124	6	No inclusions
131	H90501	TAHINGA UJULA			104° 26' 22.75"	43° 51' 38.39"	wht mdg clean v qz	Quartz	8	119 — 133	124	6	No inclusions

\*Number of Oreshowing

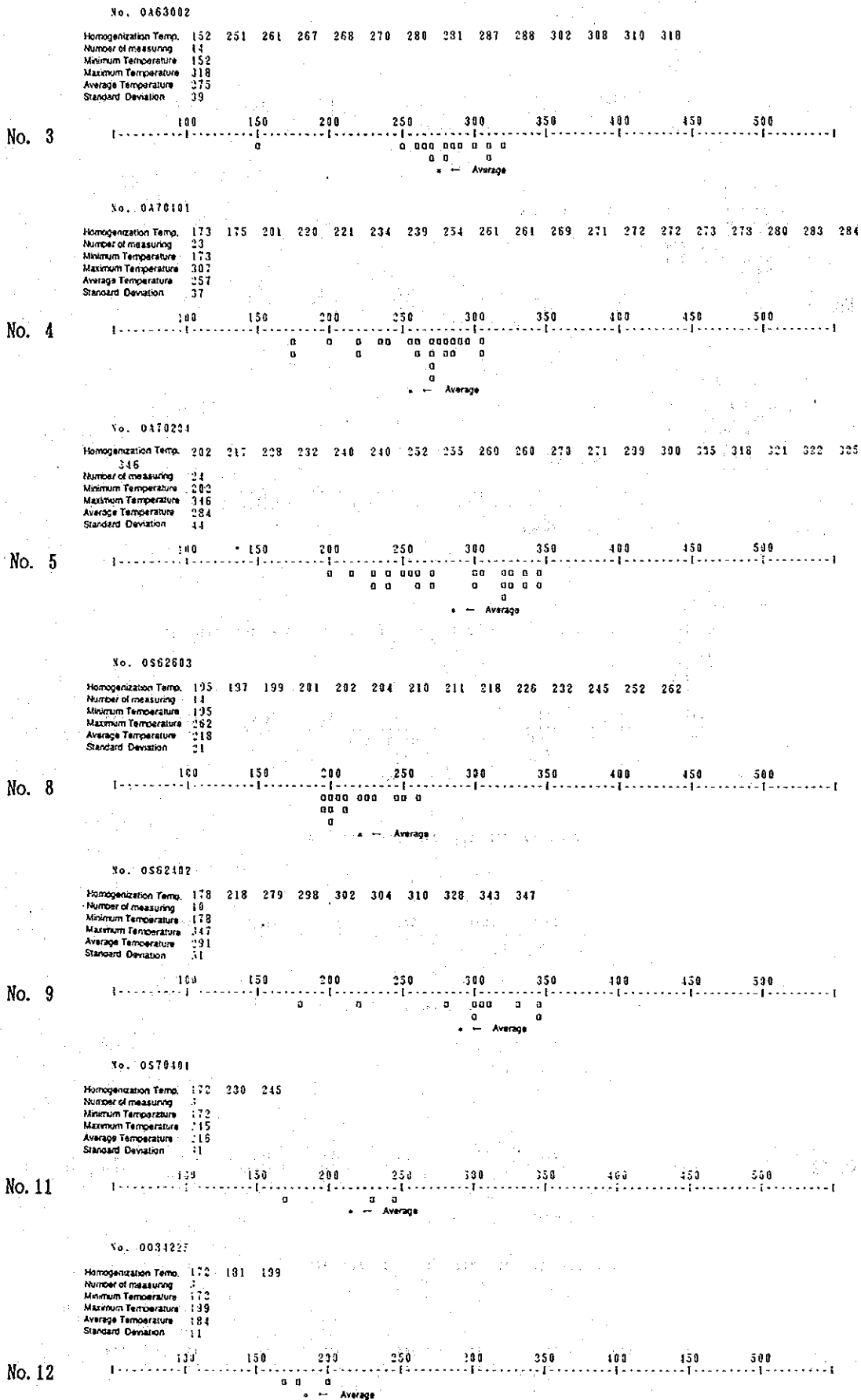


Appendix 2-12 Histograms of Homogenization Temperatures of the Fluid  
Inclusions (1)~(17)





# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (1)

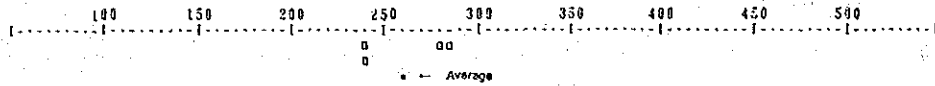


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (2)

No. 008403V

Homogenization Temp. 238 241 281 284  
 Number of measuring 4  
 Minimum Temperature 238  
 Maximum Temperature 284  
 Average Temperature 251  
 Standard Deviation 22

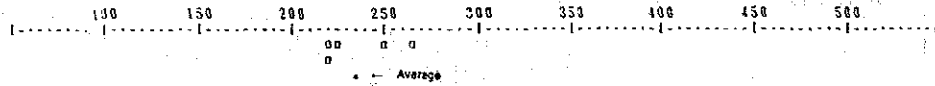
No. 13



No. 014375B

Homogenization Temp. 218 222 223 248 266  
 Number of measuring 5  
 Minimum Temperature 218  
 Maximum Temperature 266  
 Average Temperature 235  
 Standard Deviation 19

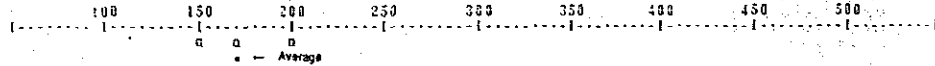
No. 14



No. 029286B

Homogenization Temp. 148 169 199  
 Number of measuring 3  
 Minimum Temperature 148  
 Maximum Temperature 199  
 Average Temperature 172  
 Standard Deviation 21

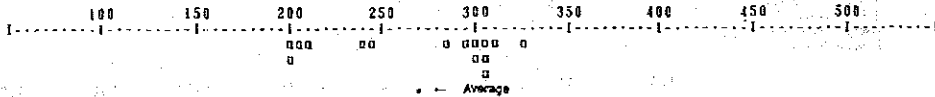
No. 15



No. 0300775

Homogenization Temp. 280 281 285 210 242 245 286 296 301 302 305 306 307 312 326  
 Number of measuring 15  
 Minimum Temperature 200  
 Maximum Temperature 326  
 Average Temperature 278  
 Standard Deviation 15

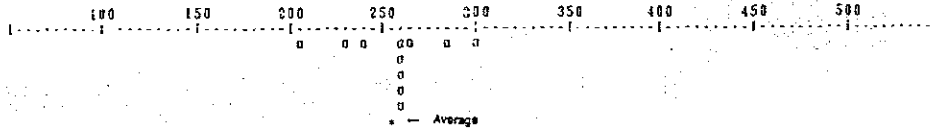
No. 16



No. 030195D

Homogenization Temp. 293 230 238 258 259 260 261 262 265 236 298  
 Number of measuring 11  
 Minimum Temperature 203  
 Maximum Temperature 298  
 Average Temperature 256  
 Standard Deviation 25

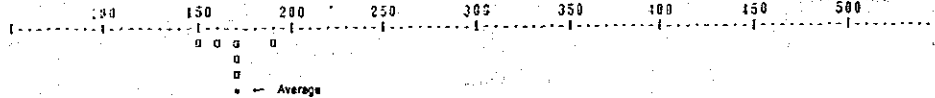
No. 17



No. 034198D

Homogenization Temp. 150 162 169 171 172 189  
 Number of measuring 6  
 Minimum Temperature 150  
 Maximum Temperature 189  
 Average Temperature 169  
 Standard Deviation 12

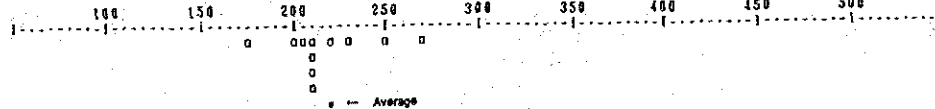
No. 19



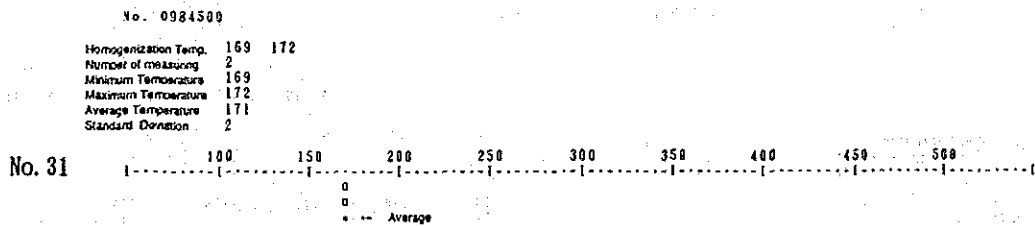
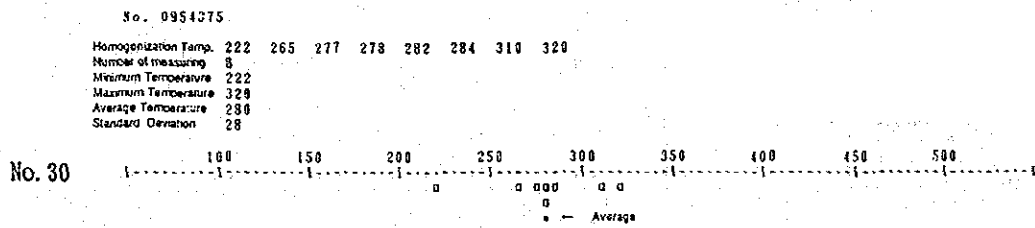
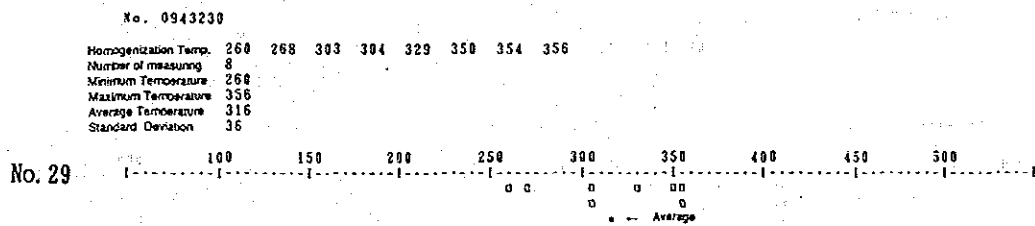
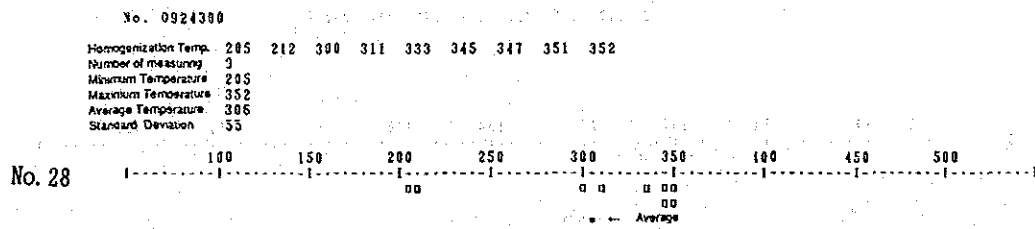
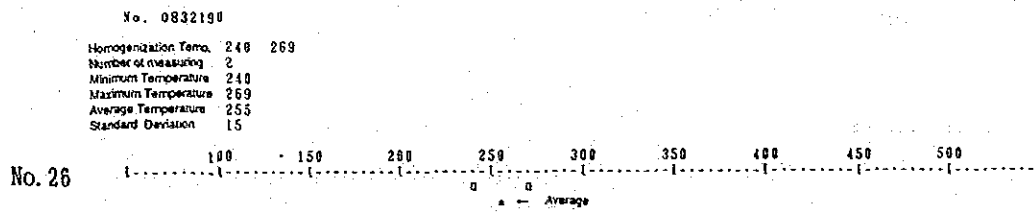
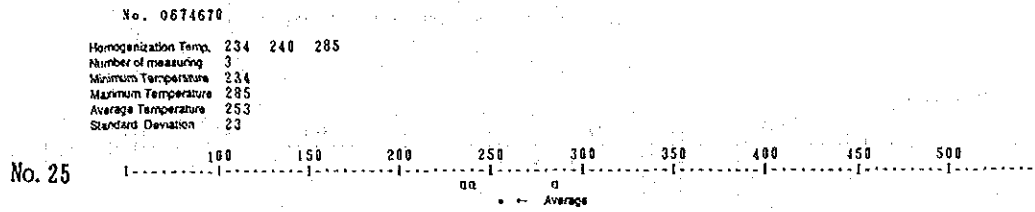
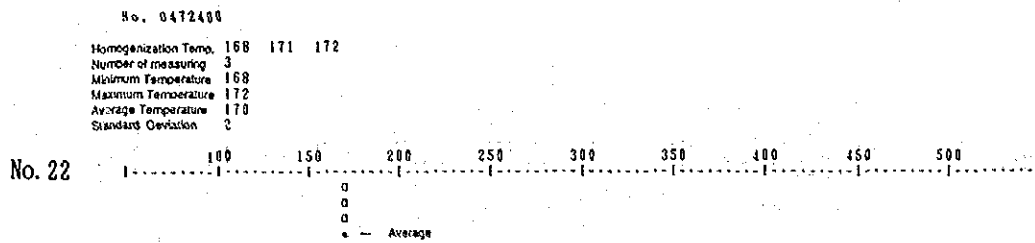
No. 0381175

Homogenization Temp. 174 201 204 211 211 212 212 220 232 248 271  
 Number of measuring 11  
 Minimum Temperature 174  
 Maximum Temperature 271  
 Average Temperature 218  
 Standard Deviation 24

No. 20



# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (3)

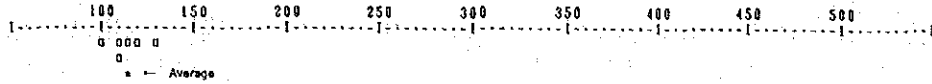


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (4)

No. 0570510

Homogenization Temp. 102 111 112 117 121 128  
 Number of measuring 6  
 Minimum Temperature 102  
 Maximum Temperature 128  
 Average Temperature 115  
 Standard Deviation 8

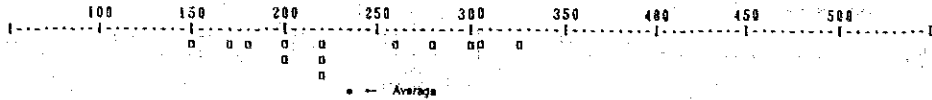
No. 34



No. 0580501

Homogenization Temp. 151 172 179 199 201 218 219 221 258 280 298 305 323  
 Number of measuring 13  
 Minimum Temperature 151  
 Maximum Temperature 323  
 Average Temperature 233  
 Standard Deviation 53

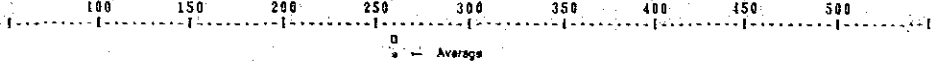
No. 36



No. 0580504

Homogenization Temp. 262  
 Number of measuring 1  
 Minimum Temperature 262  
 Maximum Temperature 262  
 Average Temperature 262  
 Standard Deviation 0

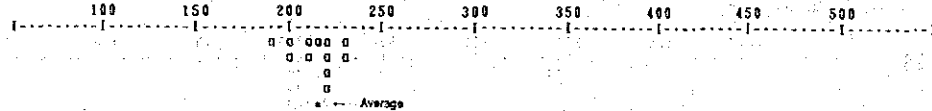
No. 37



No. X580501

Homogenization Temp. 189 199 201 209 212 217 220 220 221 222 231 232  
 Number of measuring 12  
 Minimum Temperature 189  
 Maximum Temperature 232  
 Average Temperature 214  
 Standard Deviation 12

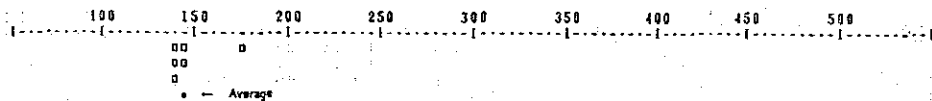
No. 38



No. X580504

Homogenization Temp. 138 139 142 143 145 175  
 Number of measuring 6  
 Minimum Temperature 138  
 Maximum Temperature 175  
 Average Temperature 147  
 Standard Deviation 13

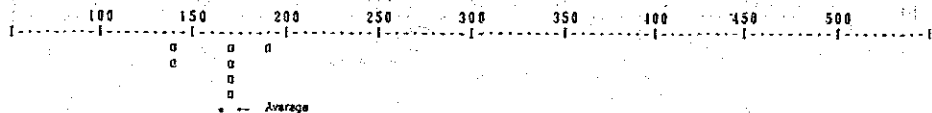
No. 39



No. X580505

Homogenization Temp. 139 141 169 170 170 171 189  
 Number of measuring 7  
 Minimum Temperature 139  
 Maximum Temperature 189  
 Average Temperature 164  
 Standard Deviation 17

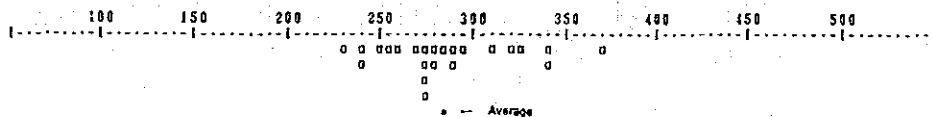
No. 40



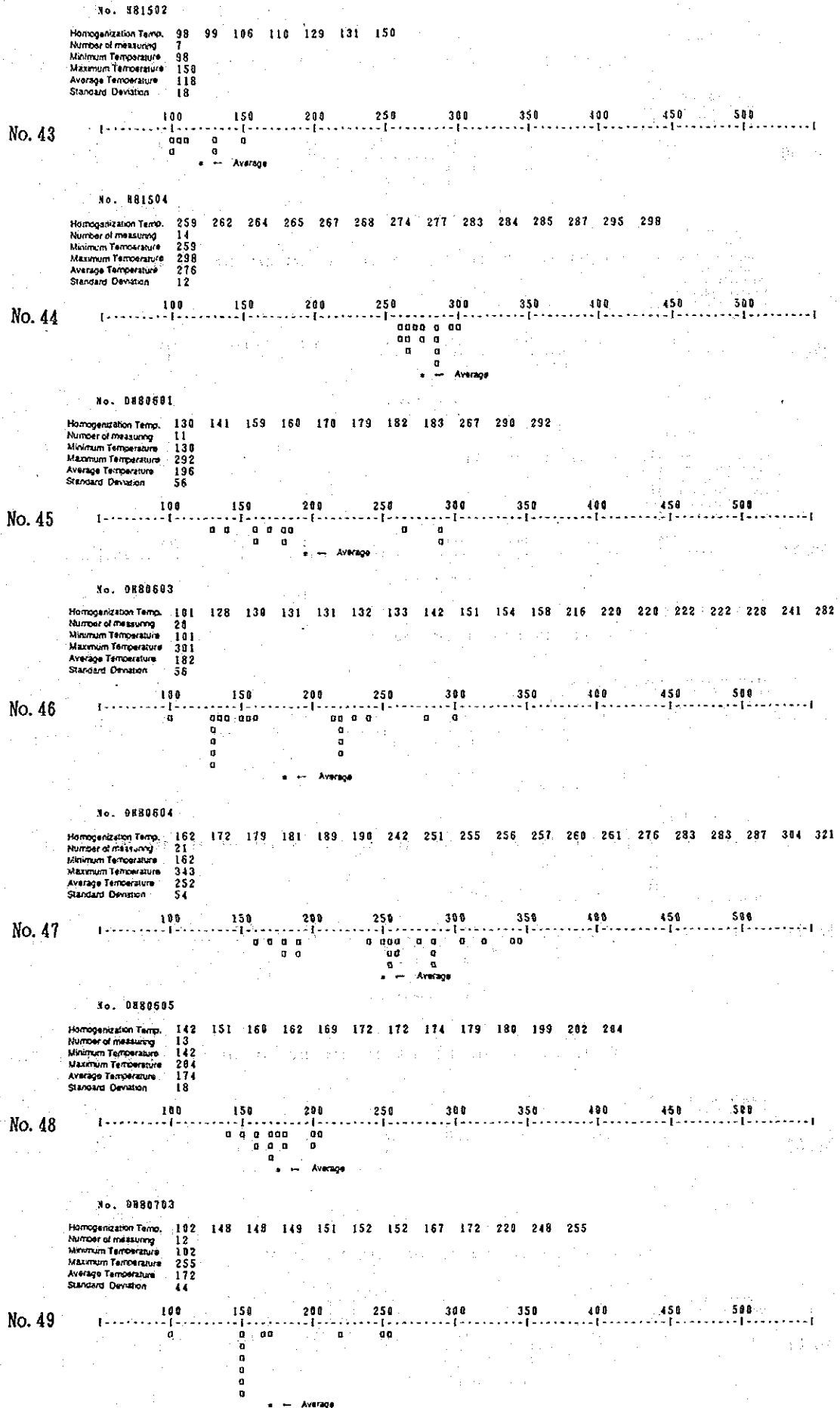
No. 0581105

Homogenization Temp. 228 238 240 250 254 260 272 273 274 276 277 280 282 284 289 290 296 310 320  
 Number of measuring 23  
 Minimum Temperature 228  
 Maximum Temperature 368  
 Average Temperature 285  
 Standard Deviation 35

No. 41

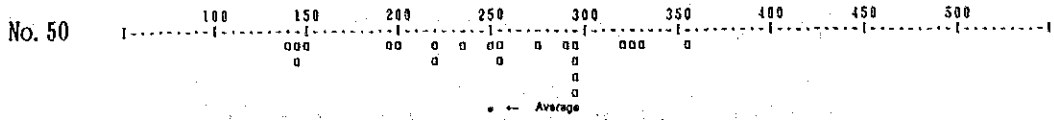


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (5)

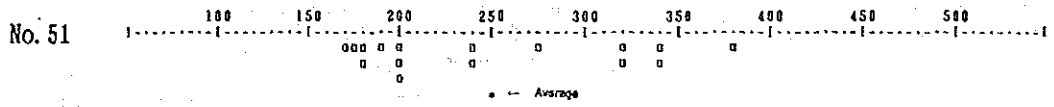


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions(6)

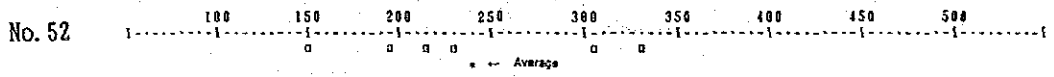
No. 0H80705  
 Homogenization Temp. 139 145 147 151 196 199 220 222 236 250 254 254 274 290 294 295 296 296 320  
 Number of measuring 22  
 Minimum Temperature 139  
 Maximum Temperature 354  
 Average Temperature 249  
 Standard Deviation 64



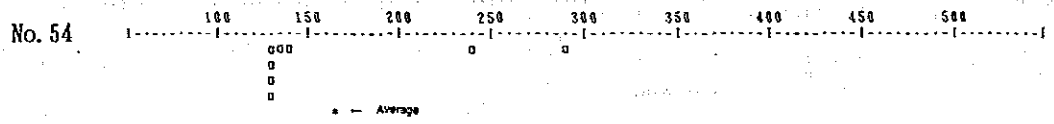
No. 0S80710  
 Homogenization Temp. 172 175 180 181 189 199 201 202 241 242 275 320 322 340 342 380  
 Number of measuring 16  
 Minimum Temperature 172  
 Maximum Temperature 380  
 Average Temperature 248  
 Standard Deviation 69



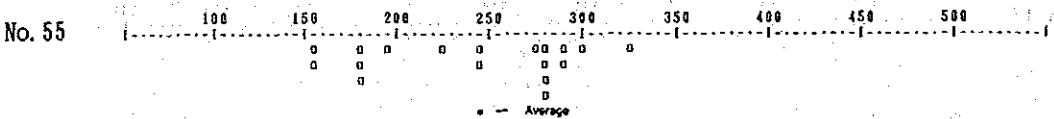
No. 1R80701  
 Homogenization Temp. 151 197 214 232 303 329  
 Number of measuring 6  
 Minimum Temperature 151  
 Maximum Temperature 329  
 Average Temperature 238  
 Standard Deviation 61



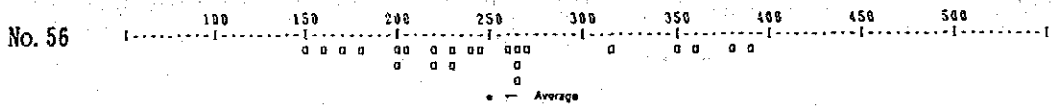
No. 8R80761  
 Homogenization Temp. 129 130 130 131 135 139 238 289  
 Number of measuring 8  
 Minimum Temperature 129  
 Maximum Temperature 289  
 Average Temperature 165  
 Standard Deviation 58



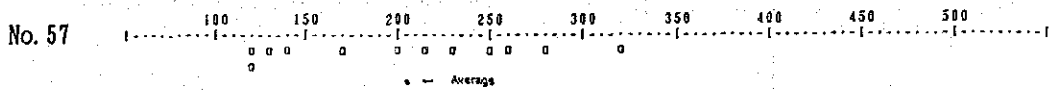
No. 8R80702  
 Homogenization Temp. 154 157 179 180 182 197 227 243 245 273 279 280 281 282 288 292 301 325  
 Number of measuring 18  
 Minimum Temperature 154  
 Maximum Temperature 325  
 Average Temperature 243  
 Standard Deviation 53



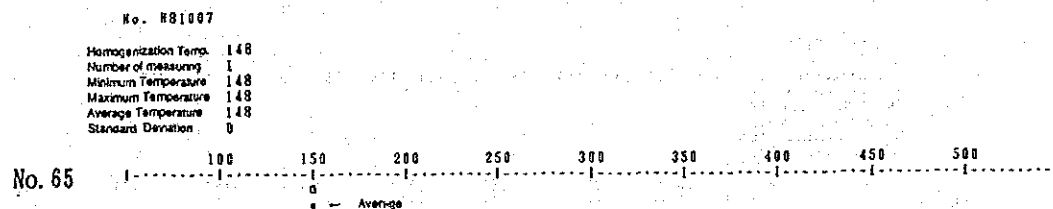
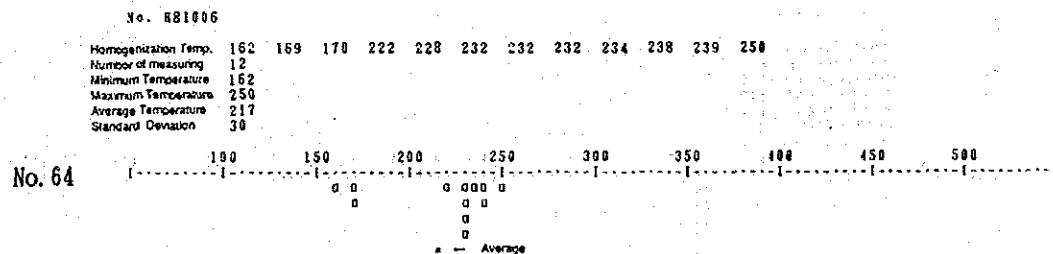
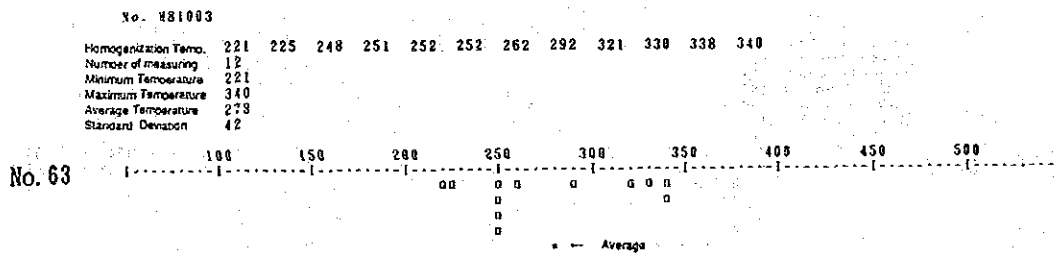
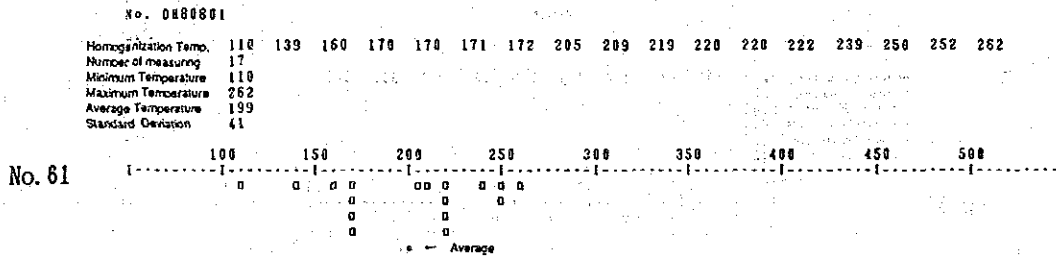
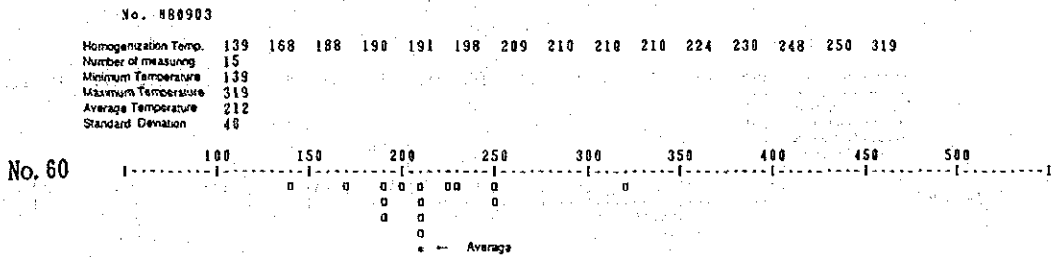
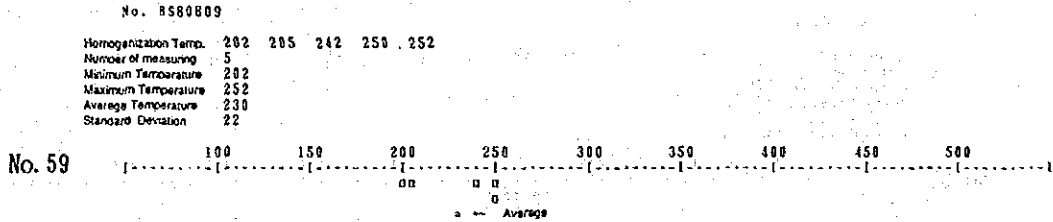
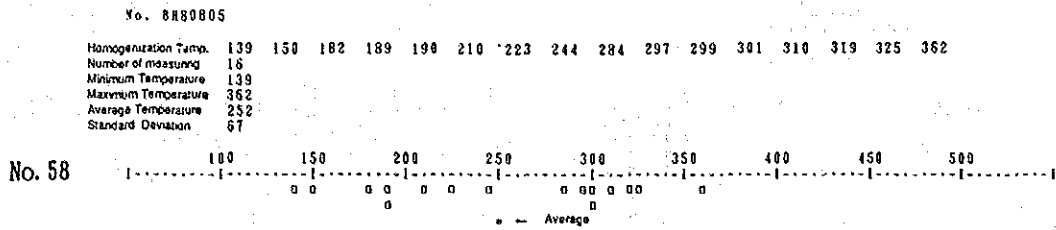
No. 8R80703  
 Homogenization Temp. 149 160 172 179 200 201 205 222 222 230 238 242 245 262 264 266 267 270 315  
 Number of measuring 23  
 Minimum Temperature 149  
 Maximum Temperature 392  
 Average Temperature 251  
 Standard Deviation 67



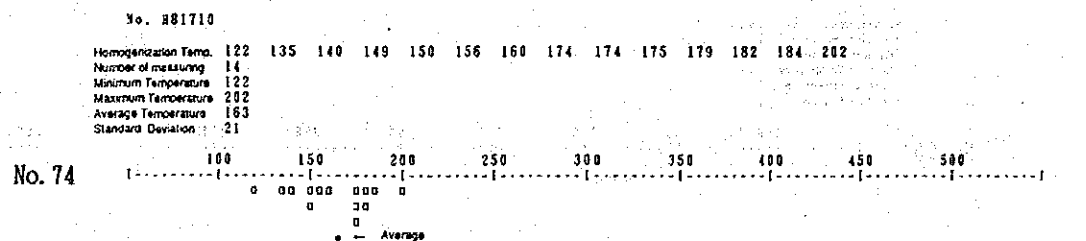
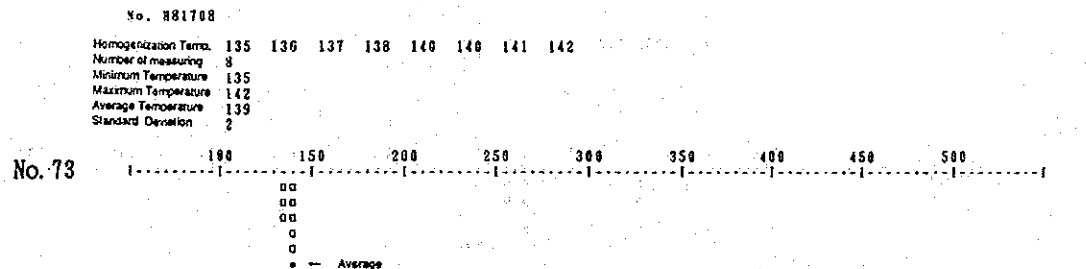
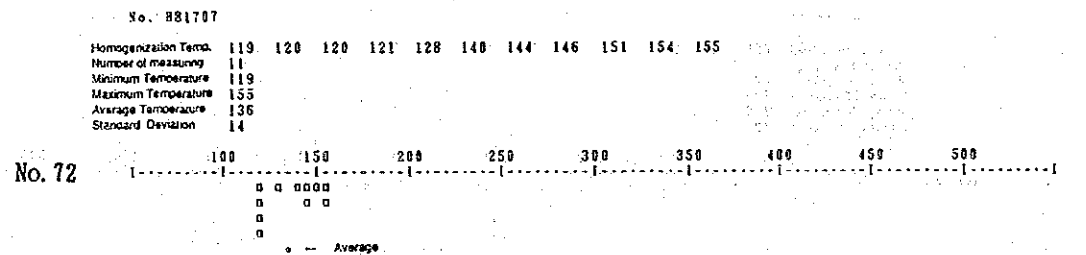
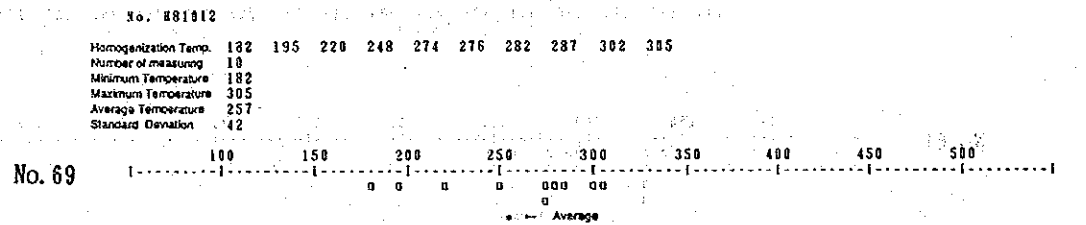
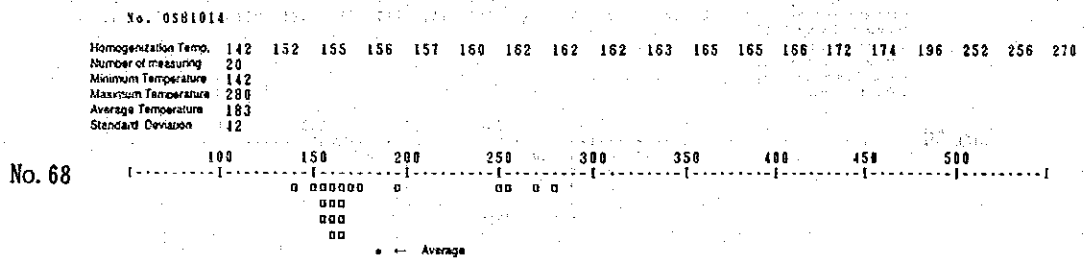
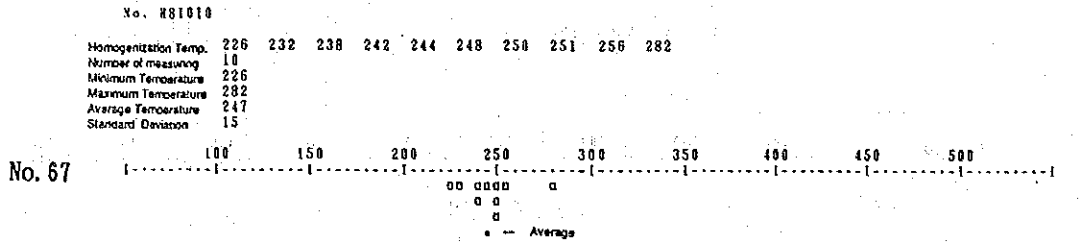
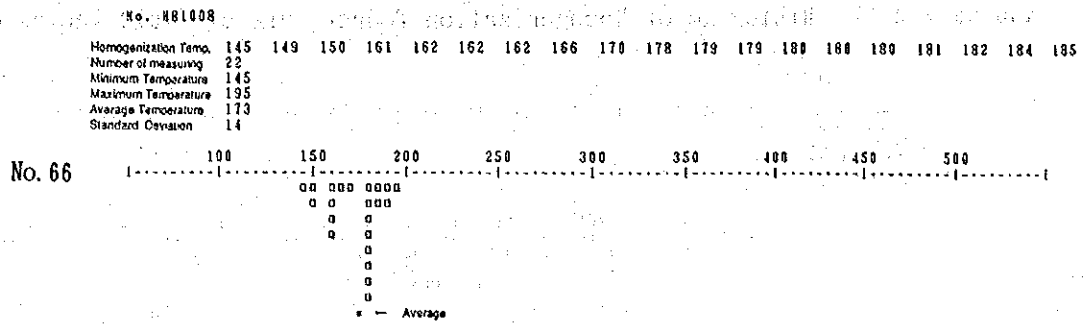
No. 3R80882  
 Homogenization Temp. 129 121 131 140 169 202 216 232 248 260 282 320  
 Number of measuring 12  
 Minimum Temperature 120  
 Maximum Temperature 320  
 Average Temperature 203  
 Standard Deviation 65



# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (7)



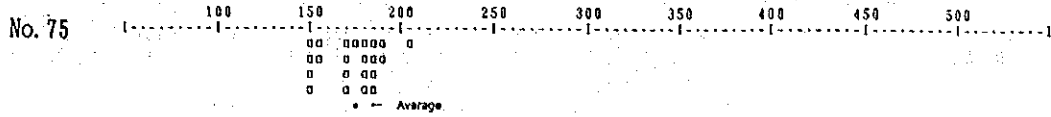
# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (8)



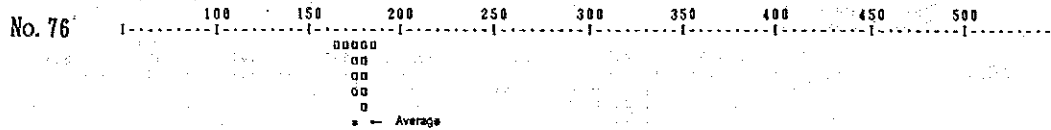


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (9)

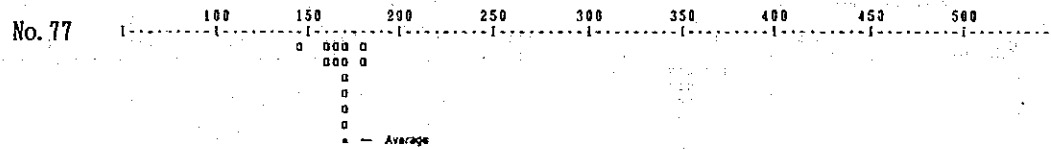
No. H81711  
 Homogenization Temp. 149 150 151 152 153 154 169 170 172 172 175 179 180 181 182 184 184 186 187  
 Number of measuring 22  
 Minimum Temperature 149  
 Maximum Temperature 205  
 Average Temperature 173  
 Standard Deviation 15



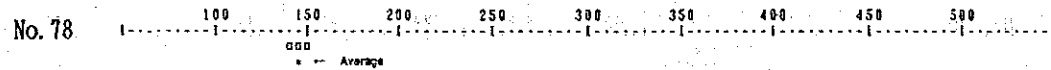
No. H81712  
 Homogenization Temp. 167 170 174 174 175 176 178 179 179 180 181 186  
 Number of measuring 12  
 Minimum Temperature 167  
 Maximum Temperature 186  
 Average Temperature 177  
 Standard Deviation 5



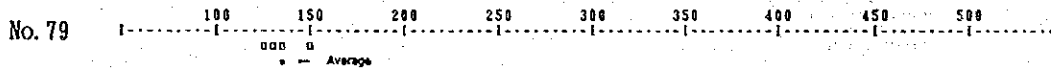
No. H81714  
 Homogenization Temp. 146 162 162 163 164 168 170 170 171 172 172 178 180  
 Number of measuring 13  
 Minimum Temperature 146  
 Maximum Temperature 180  
 Average Temperature 168  
 Standard Deviation 8



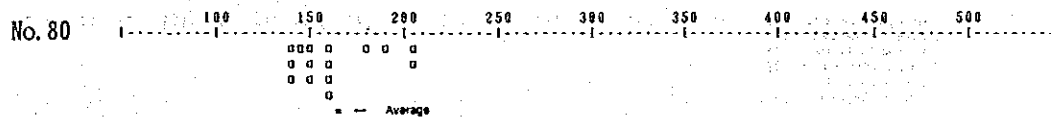
No. H81715  
 Homogenization Temp. 142 146 152  
 Number of measuring 3  
 Minimum Temperature 142  
 Maximum Temperature 152  
 Average Temperature 147  
 Standard Deviation 4



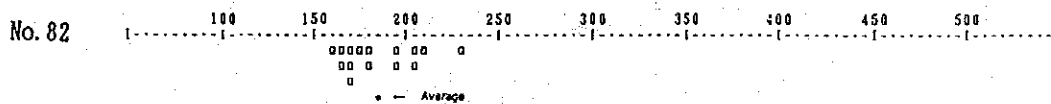
No. H81802  
 Homogenization Temp. 124 130 136 148  
 Number of measuring 4  
 Minimum Temperature 124  
 Maximum Temperature 148  
 Average Temperature 135  
 Standard Deviation 9



No. H81803  
 Homogenization Temp. 138 142 142 146 150 151 152 158 160 160 161 180 189 204 205  
 Number of measuring 15  
 Minimum Temperature 138  
 Maximum Temperature 205  
 Average Temperature 163  
 Standard Deviation 21



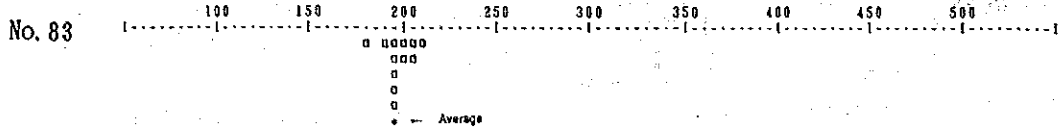
No. H82702  
 Homogenization Temp. 162 164 165 168 170 170 175 179 180 195 196 203 205 249 229  
 Number of measuring 15  
 Minimum Temperature 162  
 Maximum Temperature 229  
 Average Temperature 185  
 Standard Deviation 20



# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (10)

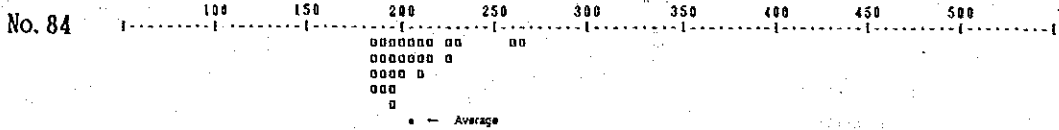
No. 882703

Homogenization Temp. 182 191 193 194 194 195 195 200 202 203 205 209  
 Number of measuring 12  
 Minimum Temperature 182  
 Maximum Temperature 209  
 Average Temperature 197  
 Standard Deviation 12



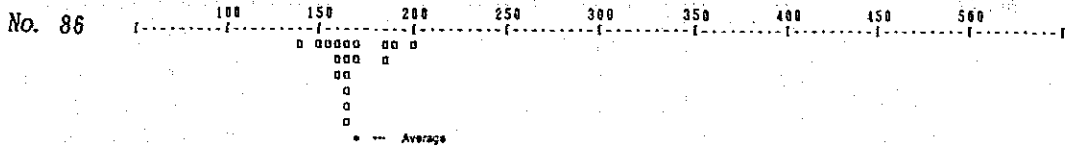
No. 882708

Homogenization Temp. 185 186 187 187 188 192 192 192 193 194 196 195 196 199 200 201 203 205 211  
 Number of measuring 29  
 Minimum Temperature 185  
 Maximum Temperature 211  
 Average Temperature 206  
 Standard Deviation 20



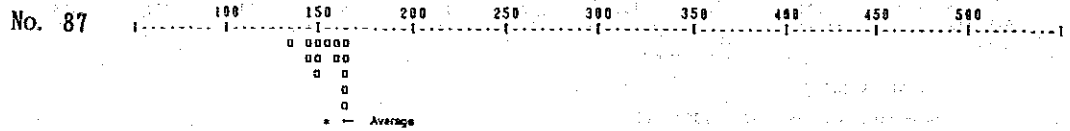
No. 883110

Homogenization Temp. 140 149 157 158 160 161 163 164 165 166 167 167 170 171 184 186 189 200  
 Number of measuring 18  
 Minimum Temperature 140  
 Maximum Temperature 200  
 Average Temperature 168  
 Standard Deviation 14



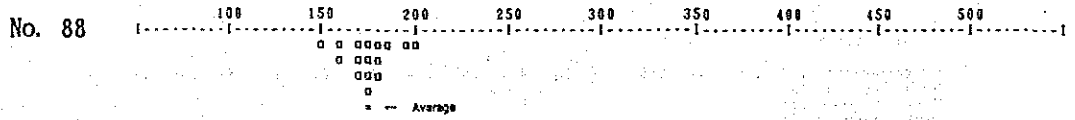
No. 883111

Homogenization Temp. 134 145 147 149 149 152 154 161 162 163 163 164 165 166  
 Number of measuring 14  
 Minimum Temperature 134  
 Maximum Temperature 166  
 Average Temperature 153  
 Standard Deviation 9



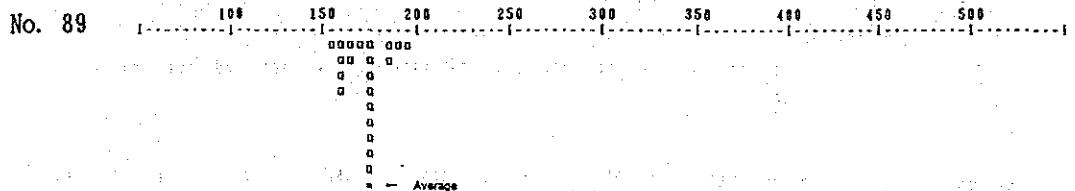
No. 883112

Homogenization Temp. 152 159 160 168 169 170 173 174 176 177 178 179 180 184 196 199  
 Number of measuring 16  
 Minimum Temperature 152  
 Maximum Temperature 199  
 Average Temperature 175  
 Standard Deviation 12

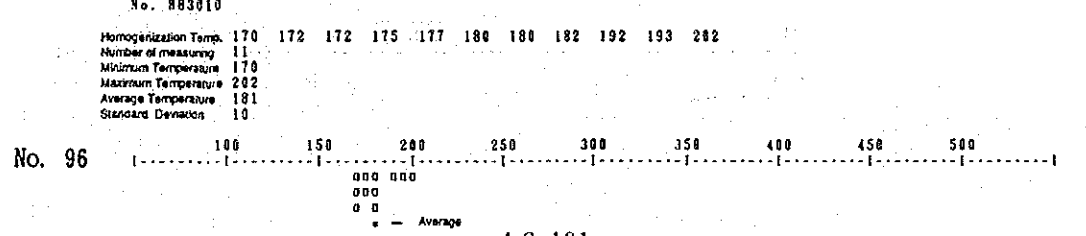
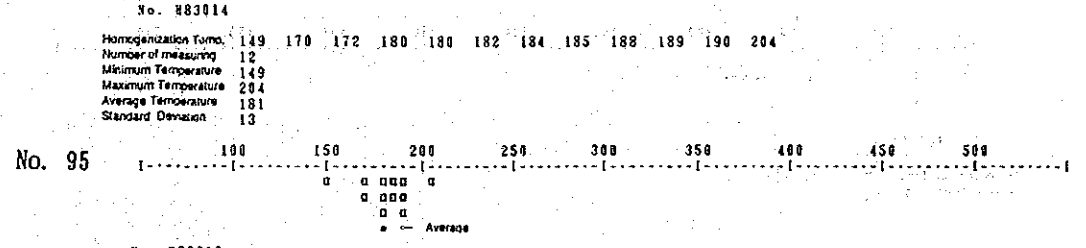
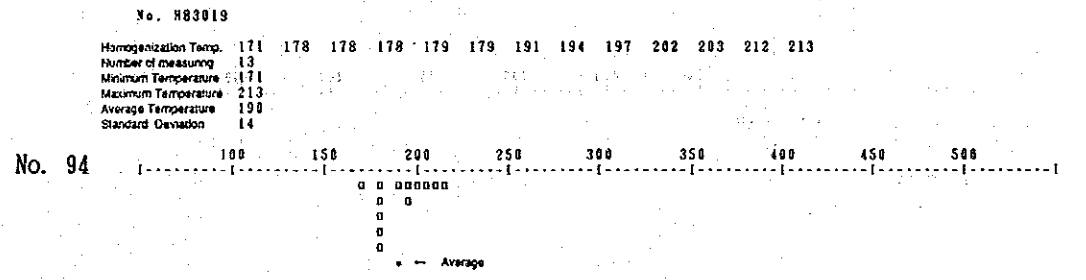
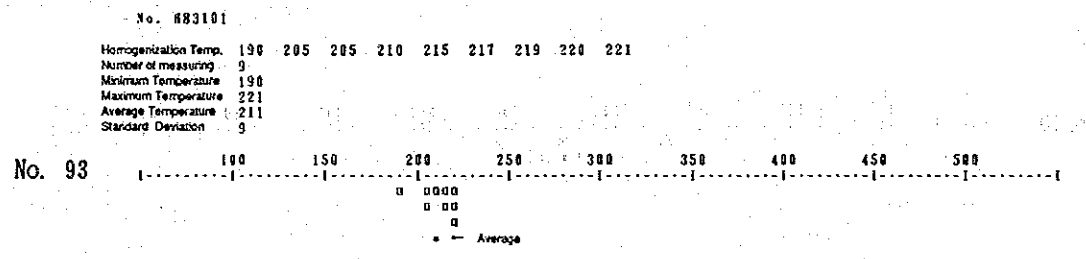
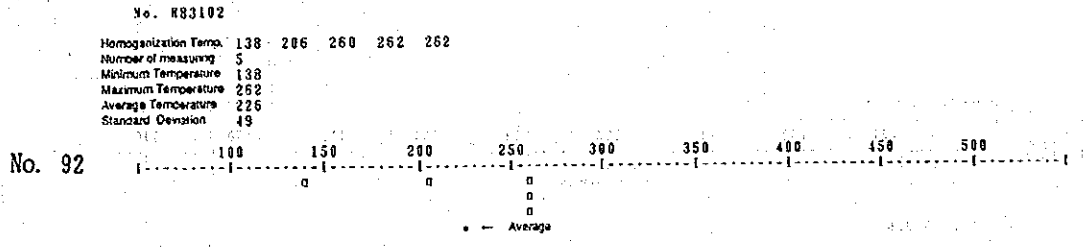
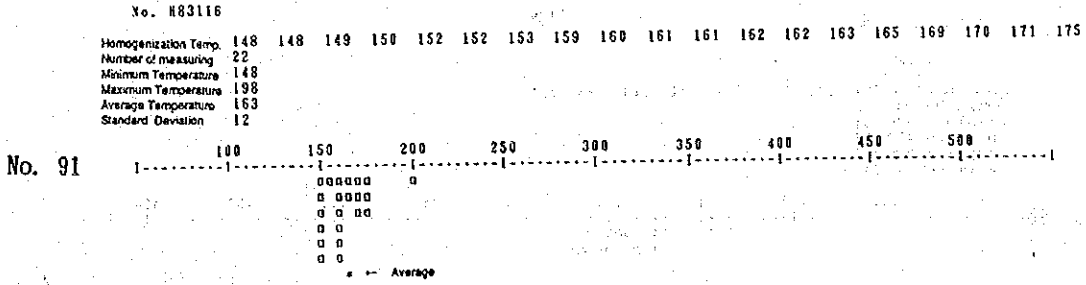
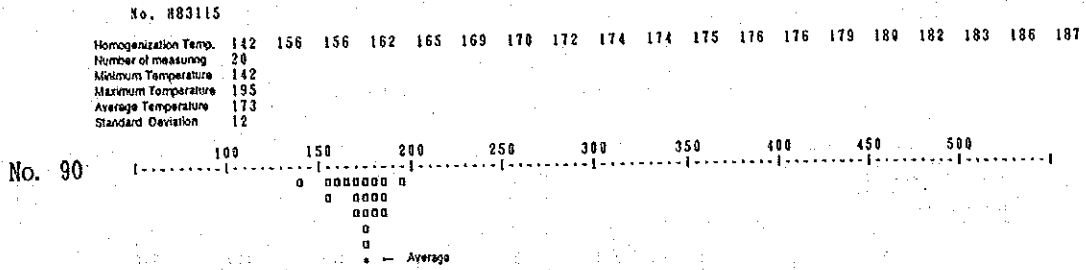


No. 883113

Homogenization Temp. 156 158 159 159 160 166 167 170 173 175 175 175 175 176 176 177 177 185 186  
 Number of measuring 21  
 Minimum Temperature 156  
 Maximum Temperature 186  
 Average Temperature 173  
 Standard Deviation 10

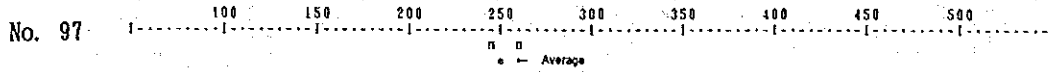


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (11)

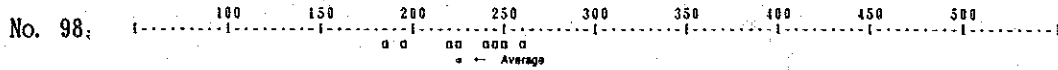


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (12)

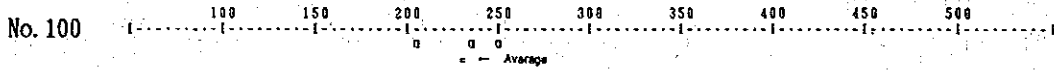
No. H83007  
 Homogenization Temp. 244 258  
 Number of measuring 2  
 Minimum Temperature 244  
 Maximum Temperature 258  
 Average Temperature 251  
 Standard Deviation 7



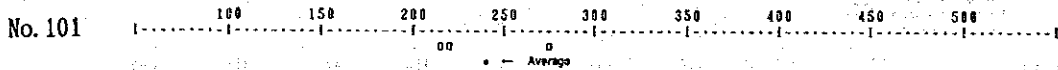
No. H83009  
 Homogenization Temp. 184 196 218 225 242 243 248 258  
 Number of measuring 8  
 Minimum Temperature 184  
 Maximum Temperature 258  
 Average Temperature 227  
 Standard Deviation 24



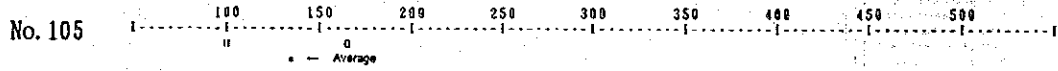
No. H83002  
 Homogenization Temp. 207 235 250  
 Number of measuring 3  
 Minimum Temperature 207  
 Maximum Temperature 250  
 Average Temperature 231  
 Standard Deviation 18



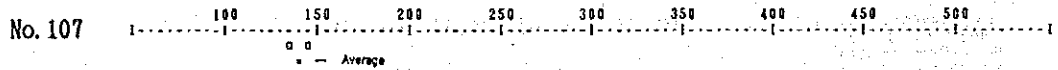
No. H82916  
 Homogenization Temp. 217 222 275  
 Number of measuring 3  
 Minimum Temperature 217  
 Maximum Temperature 275  
 Average Temperature 238  
 Standard Deviation 26



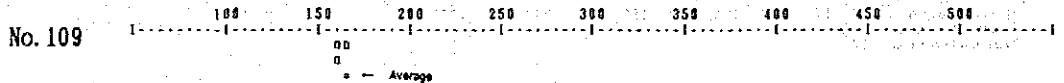
No. H82903  
 Homogenization Temp. 101 166  
 Number of measuring 2  
 Minimum Temperature 101  
 Maximum Temperature 166  
 Average Temperature 134  
 Standard Deviation 33



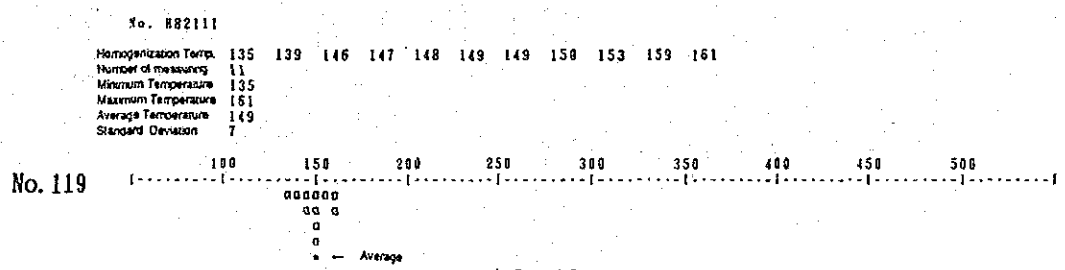
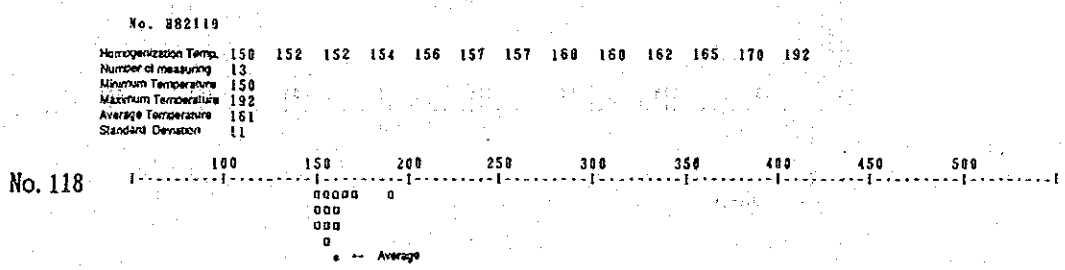
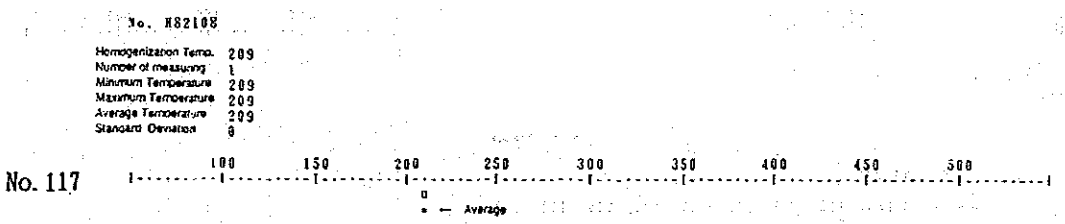
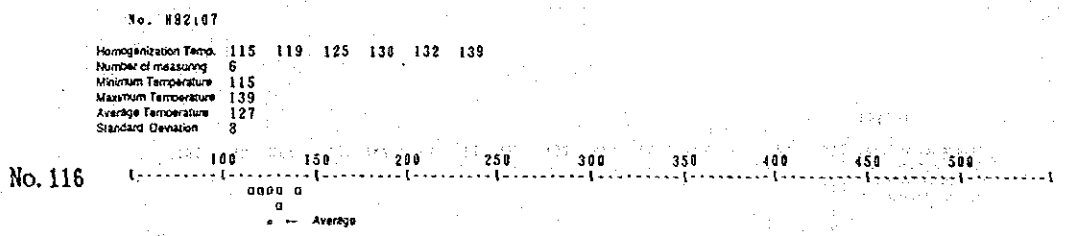
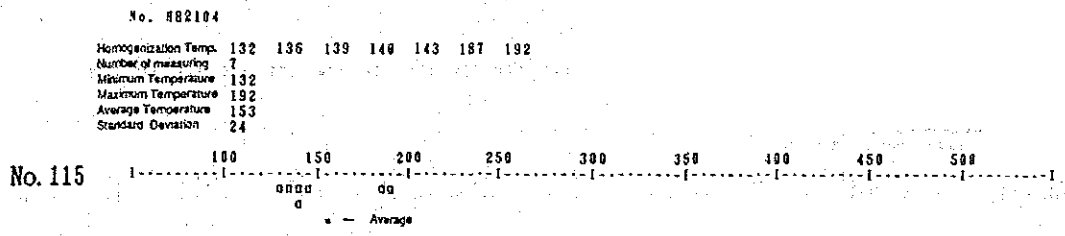
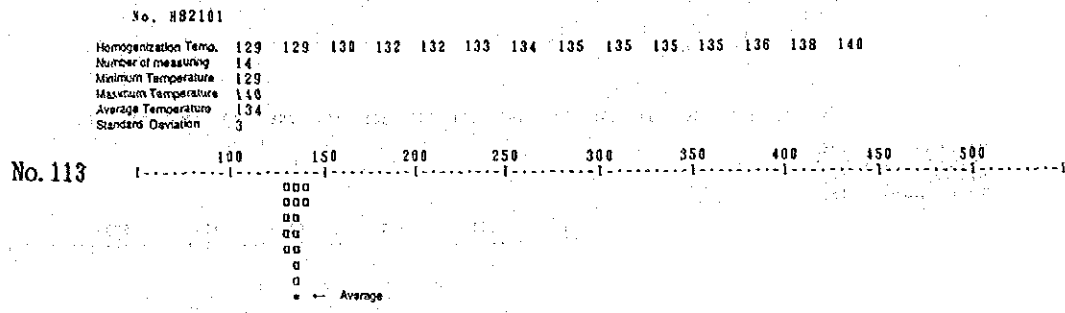
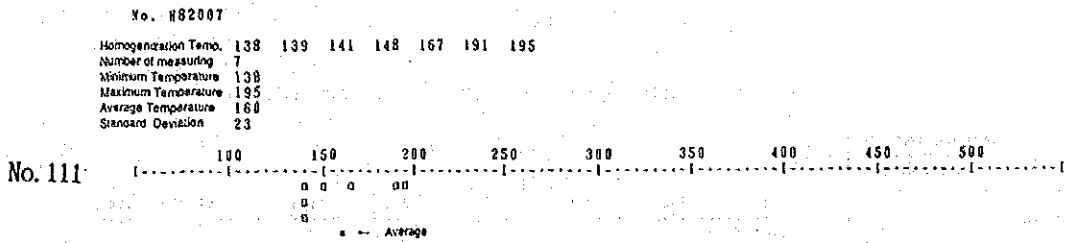
No. H82002  
 Homogenization Temp. 136 146  
 Number of measuring 2  
 Minimum Temperature 136  
 Maximum Temperature 146  
 Average Temperature 141  
 Standard Deviation 5



No. H82004  
 Homogenization Temp. 161 162 167  
 Number of measuring 3  
 Minimum Temperature 161  
 Maximum Temperature 167  
 Average Temperature 163  
 Standard Deviation 3

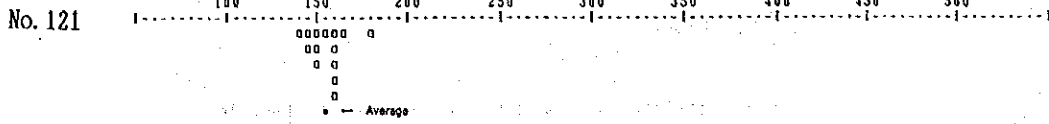


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (13)

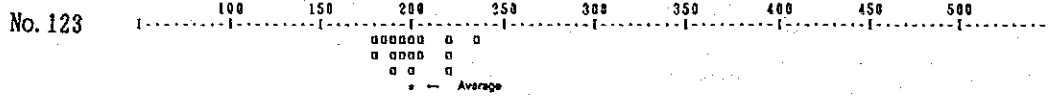


# Appendix 2-12 Histogram of Homogenization Temperature of Fluid Inclusions (14)

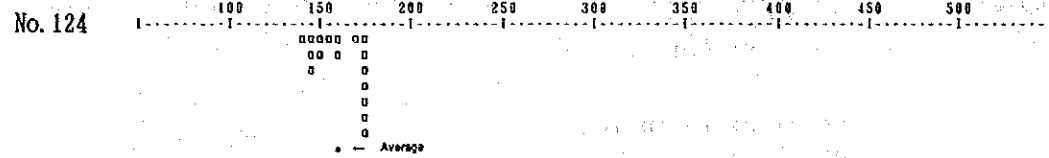
No. 882406  
 Homogenization Temp. 142 144 145 149 150 152 155 159 160 150 161 162 167 179  
 Number of measuring 14  
 Minimum Temperature 142  
 Maximum Temperature 179  
 Average Temperature 156  
 Standard Deviation 10



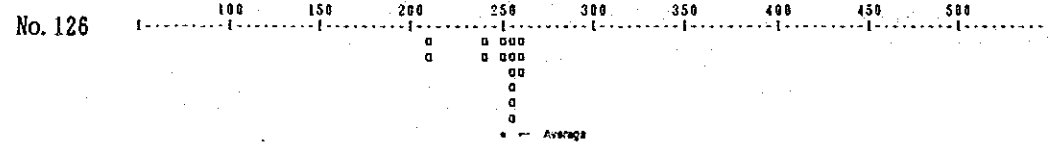
No. 882411  
 Homogenization Temp. 180 182 185 190 191 192 195 197 199 200 201 205 206 219 220 222 237  
 Number of measuring 17  
 Minimum Temperature 180  
 Maximum Temperature 237  
 Average Temperature 201  
 Standard Deviation 15



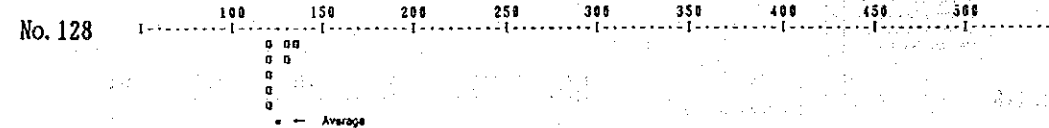
No. 882391  
 Homogenization Temp. 140 144 144 147 149 151 157 159 160 172 174 174 175 175 175 176 177  
 Number of measuring 17  
 Minimum Temperature 140  
 Maximum Temperature 177  
 Average Temperature 162  
 Standard Deviation 13



No. 882304  
 Homogenization Temp. 210 212 239 241 250 252 254 254 255 256 256 257 258 260 260  
 Number of measuring 15  
 Minimum Temperature 210  
 Maximum Temperature 260  
 Average Temperature 248  
 Standard Deviation 16



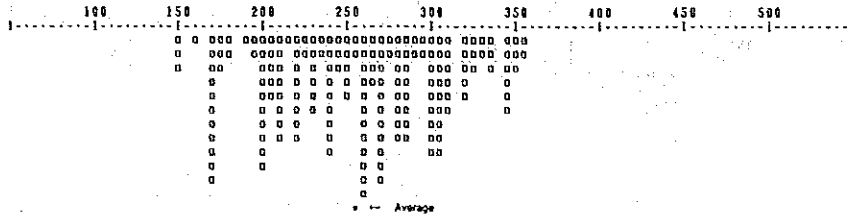
No. 882205  
 Homogenization Temp. 119 119 120 120 121 130 132 133  
 Number of measuring 8  
 Minimum Temperature 119  
 Maximum Temperature 133  
 Average Temperature 124  
 Standard Deviation 6



# Appendix 2-12 Histogram of Homogenization Temperature or Fluid Inclusions(15)

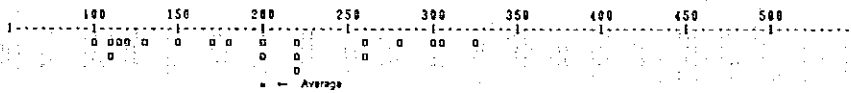
## Olon Ovoot deposit total

Homogenization Temp.	148	150	152	162	168	169	169	169	171	171	172	172	172	172	173	174	175	178	181	189	195	197	
Number of measuring	199	199	200	201	201	201	202	202	203	204	204	205	205	210	210	211	211	212	212	212	217	218	218
Minimum Temperature	220	220	221	222	222	223	226	228	230	238	232	232	232	234	234	238	238	239	240	240	240	240	241
Maximum Temperature	248	248	251	252	252	254	255	258	259	260	260	261	261	261	261	262	262	265	265	266	267	268	268
Average Temperature	270	270	271	271	272	272	273	277	278	278	279	280	280	281	281	282	283	284	284	284	285	286	286
Standard Deviation	293	296	298	299	300	300	301	302	302	303	303	304	304	305	306	307	307	308	310	310	310	311	312
Minimum Temperature	318	320	321	322	325	326	327	328	329	333	335	337	343	345	345	346	347	347	350	351	352	354	356
Maximum Temperature	148																						
Maximum Temperature	356																						
Average Temperature	256																						
Standard Deviation	52																						



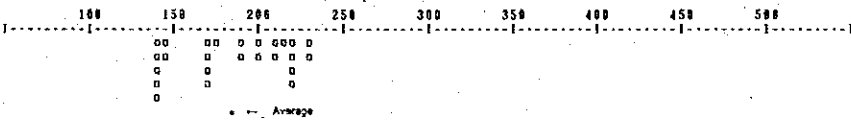
## North Olon Ovoot total

Homogenization Temp.	182	111	112	117	121	128	151	172	179	199	261	218	219	221	258	262	288	298	305	323		
Number of measuring	28																					
Minimum Temperature	182																					
Maximum Temperature	323																					
Average Temperature	199																					
Standard Deviation	79																					



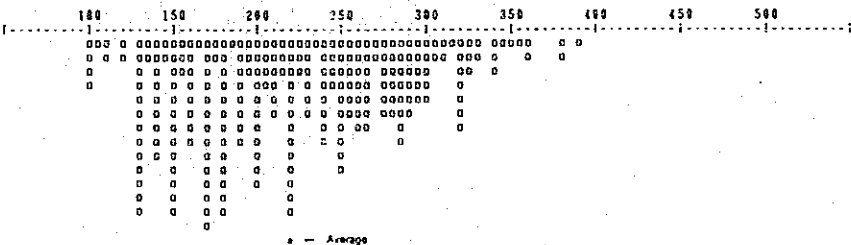
## Horimt Hodag total

Homogenization Temp.	138	139	139	141	142	143	145	169	170	170	171	175	189	189	199	201	209	212	217	220	228	221	222	
Number of measuring	231	232	25																					
Minimum Temperature	138																							
Maximum Temperature	232																							
Average Temperature	184																							
Standard Deviation	33																							



## Tsagaan Uula arae total

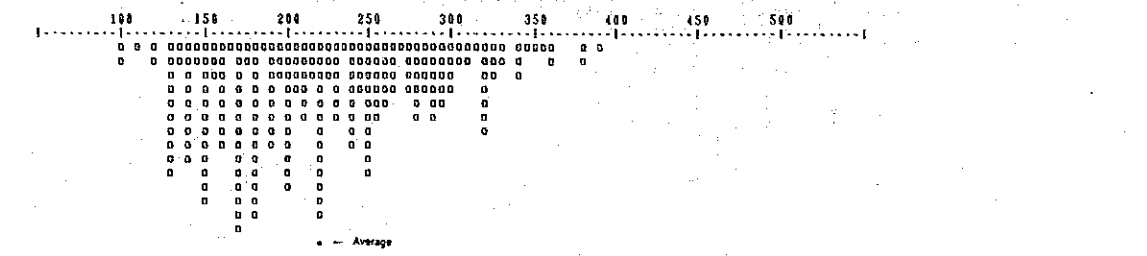
Homogenization Temp.	98	99	101	102	106	110	110	120	121	128	129	129	130	130	130	130	131	131	131	131	131	132	133	135
Number of measuring	139	139	139	139	140	141	142	142	145	147	148	148	149	149	150	150	151	151	151	151	151	152	152	154
Minimum Temperature	158	159	160	160	160	160	162	162	167	168	169	169	170	170	170	171	172	172	172	172	172	172	174	175
Maximum Temperature	179	179	179	180	180	180	181	181	182	182	182	183	188	189	189	189	190	190	190	191	196	197	197	199
Average Temperature	208	211	211	212	212	212	212	214	215	215	215	219	219	219	219	219	219	219	219	220	220	220	220	
Standard Deviation	222	222	222	222	223	224	227	228	230	230	230	232	232	236	238	239	241	241	242	242	242	242	243	244
Minimum Temperature	245	248	248	248	250	250	250	250	251	252	252	254	254	255	255	256	257	259	268	268	268	268	268	268
Maximum Temperature	266	267	267	267	268	270	273	274	274	275	276	277	279	280	281	282	282	282	283	283	283	284	284	285
Average Temperature	289	290	290	292	292	294	295	295	296	297	298	299	301	301	301	303	304	310	310	310	310	319	319	320
Standard Deviation	324	325	325	329	332	340	341	342	343	350	354	360	362	380	381	392								
Minimum Temperature																								
Maximum Temperature																								
Average Temperature																								
Standard Deviation																								



### Appendix 2-12 Histogram of Homogenization Temperature or Fluid Inclusions(16)

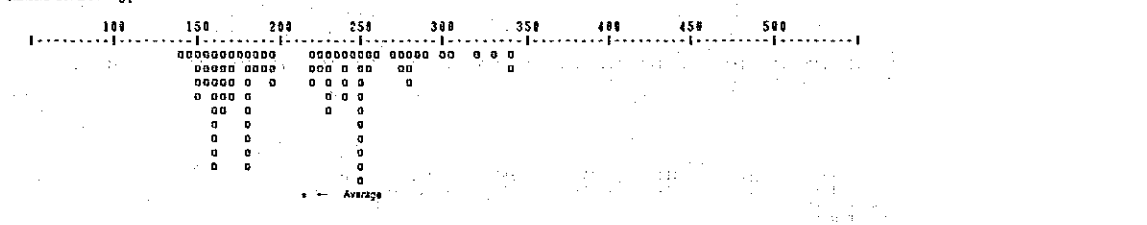
#### Dugshih area total

Homogenization Temp.	101	102	110	120	121	128	129	130	130	130	130	131	131	131	131	132	133	135	139	139	139	139	139	139	139	140	140	140	161	162		
	141	142	142	145	147	148	148	149	150	151	151	151	151	152	152	154	154	157	158	159	160	160	160	160	160	160	160	160	160	160	162	
	162	167	168	169	169	170	170	170	171	172	172	172	172	172	174	175	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179	179
	181	182	182	182	183	188	189	189	189	190	190	191	195	197	197	198	199	199	199	200	201	201	201	201	201	201	201	201	201	201	201	
	204	205	205	205	209	210	210	210	210	214	216	216	219	220	220	220	220	220	222	222	222	222	222	222	222	222	222	222	222	222	222	
	224	227	228	230	230	230	232	232	235	238	239	241	241	242	242	242	243	244	245	245	248	248	248	248	248	248	248	248	248	248	248	
	250	251	252	252	254	255	255	255	257	260	260	261	262	262	264	266	267	267	270	273	274	275	276	276	276	276	276	276	276	276	276	
	282	282	282	283	283	284	287	288	289	290	290	292	292	292	294	295	296	296	297	299	301	301	301	301	303	304	310	310	310	310	310	
	319	319	320	320	320	321	322	324	325	325	329	332	340	341	342	343	350	354	360	362	380	381	381	381	381	381	381	381	381	381	381	



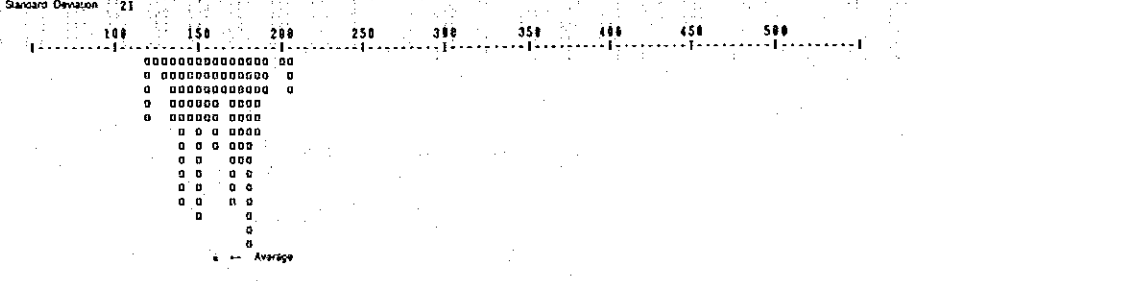
#### Onh area total

Homogenization Temp.	142	145	148	149	150	152	155	156	157	160	161	162	162	162	162	162	162	162	163	165	165	166	166	228	
	169	170	174	172	174	178	179	179	180	180	181	182	182	184	185	189	190	195	195	196	220	221	222	225	226
	232	232	232	232	234	238	238	239	242	244	248	248	248	250	250	251	251	252	252	252	256	262	270	274	276
	282	292	287	292	302	305	321	330	338	340															



#### Soing area total

Homogenization Temp.	119	120	120	121	122	124	128	130	135	135	136	136	137	138	138	140	140	140	140	141	142	142	142	142	160	160	160
	142	144	146	146	146	148	149	149	150	150	150	151	151	151	152	152	152	153	154	154	155	156	158	160	160	160	160
	161	162	162	163	164	167	168	169	170	170	170	171	172	172	172	174	174	174	174	175	175	175	175	176	178	178	178
	179	179	179	179	180	180	180	180	181	181	182	182	184	184	186	186	187	189	189	190	202	204	205	205			

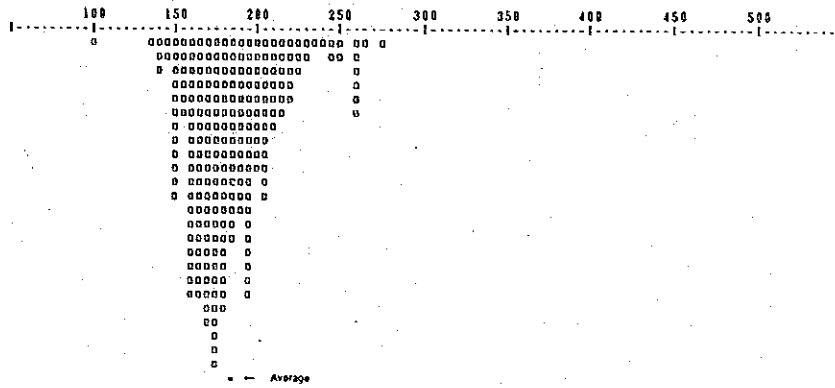




# Appendix 2-12 Histogram of Homogenization Temperature or Fluid Inclusions (17)

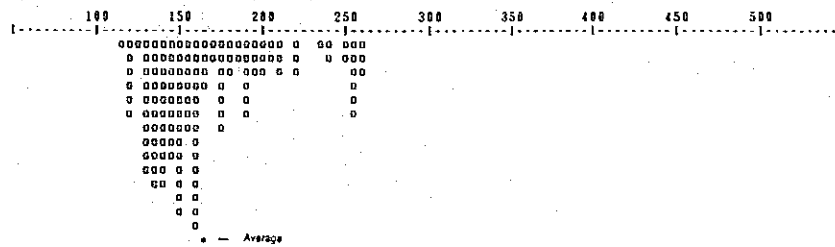
## North Harmagtai area total

Homogenization Temp.	101	134	138	149	142	145	147	148	148	149	149	149	149	149	150	152	152	152	152	153	154	156	156				
	156	157	158	158	159	159	159	160	160	160	160	161	161	161	161	162	162	162	162	162	163	163	163	164	164		
	164	165	165	165	165	166	166	166	167	167	167	168	168	169	169	169	170	170	170	170	170	170	170	170	170		
	171	171	171	172	172	172	173	173	174	174	174	175	175	175	175	175	175	175	175	175	176	176	176	177	177		
	177	177	177	177	178	178	178	179	179	179	179	180	180	180	180	180	180	180	180	182	182	182	182	182			
	184	184	185	185	185	186	186	186	186	186	187	187	187	188	188	188	189	189	189	190	190	191	191	192	193		
	193	194	194	194	194	195	195	195	195	195	195	196	196	196	196	197	198	199	199	200	200	200	201	202	202	202	
	203	203	203	203	204	205	205	205	205	205	206	207	209	209	210	211	211	212	212	213	215	215	216	217	218	219	
	220	221	222	223	225	227	229	229	235	242	243	244	248	259	258	258	260	262	262	262	263	275					
Number of measuring	234																										
Minimum Temperature	101																										
Maximum Temperature	275																										
Average Temperature	185																										
Standard Deviation	27																										



## Sologoi area total

Homogenization Temp.	115	119	119	119	120	120	121	125	129	129	130	130	130	132	132	132	132	132	133	133	134	135	135				
	135	135	136	136	136	138	138	139	139	139	140	140	140	141	142	143	144	144	144	145	146	146	147	148			
	148	149	149	149	150	150	151	152	152	152	153	154	155	156	157	157	159	159	159	159	160	160	160	160			
	161	161	161	162	162	165	167	167	170	172	174	174	175	175	175	176	177	179	180	182	185	187	190	191			
	192	192	192	195	195	197	199	200	201	205	206	209	214	212	219	220	222	237	239	241	250	252	254	254	255	256	256
Number of measuring	135																										
Minimum Temperature	115																										
Maximum Temperature	260																										
Average Temperature	157																										
Standard Deviation	38																										





### 3. Microscopic Observations and Photomicrographs (Thin Section)



## ABBREVIATION

Act : Actinolite	(Hb) : Pseudomorph after hornblende
Apt : Apatite	Kae : Kaersutite
Au : Augite	Kf : K-feldspar
Bt : Biotite	Mf : Mafic mineral
(Bt) : Pseudomorph after biotite	Ms : Muscovite
Cal : Calcite	Ne : Nepheline
Cb : Carbonate	(Ol) : Pseudomorph after olivine
Chl : Chlorite	Opq : Opaque mineral
Cly : Clay mineral	Ph : Phlogopite
Cv : Cavity	Pl : Plagioclase
Ep : Epidote	Qz : Quartz
Frg : Fragment	Sph : Sphene
Gls : Glass	Tor : Tourmaline
Go : Goethite	Zeo : Zeolite
Hb : Hornblende	

(1)

Sample No. : A80901  
Locality : Dugshih  
Rock name : Rhyolite welded (?) tuff

Observation note :

This specimen is pinkish gray, altered rhyolite welded (?) tuff, with phenocrysts of plagioclase (andesine), quartz and biotite and with altered rock fragments (mainly mudstone). Matrix shows an indistinct micro-eutaxitic foliation, and is made up of flattened glass shards which are perfectly devitrified into minute crystals of quartz and plagioclase. Plagioclase phenocryst is mostly altered to sericite.

(2)

Sample No. : DH80704  
Locality : Dugshih  
Rock name : Meta-gabbro

observation note :

This specimen is dark greenish grey, medium-grained meta-gabbro, showing an ophitic texture. It consists principally of plagioclase (labradorite-andesine), hornblende and opaque mineral. Plagioclase occurs as euhedral prismatic crystals 0.5-1mm in length. Hornblende occurs as anhedral intersertal crystals, about 0.5mm in length, and is partly changed into fibrous actinolite and scaly biotite. Epidote, carbonate minerals and sphene are observed as secondary minerals.

(3)

Sample No. : TH80703  
Locality : Dugshih  
Rock name : Rhyolite

Observation note :

This specimen is light grey, aphyric rhyolite with sandstone fragments (0.5-0.8mm diameter) and a small amount of phenocryst. Phenocryst minerals mostly smaller than 0.3mm, are mainly of biotite and altered other mafic minerals. Biotite is commonly altered to sericite or is replaced by carbonate minerals. Groundmass consists of fine-grained quartz, and of sericite as secondary minerals.

(4)

Sample No. : A82801  
Locality : North Harmagtai  
Rock name : Meta-gabbro

Observation note :

This specimen is greenish grey, fine-grained meta-gabbro. It consists principally of plagioclase, hornblende (pseudomorph) and epidote and subordinately of actinolite, sphene and quartz. Plagioclase occurs as subhedral to anhedral crystals, up to 0.1mm across. Hornblende occurs as euhedral to subhedral crystals, about 0.1mm across, and is wholly changed to actinolite. Large amount of epidote, 0.1-0.2mm across, and sphene occur as secondary minerals. Quartz and carbonate mineral veinlet are recognized.

(5)

Sample No. : A82901  
Locality : North Harmagtai  
Rock name : Mafic schist

Observation notes :

This specimen is greenish grey, mafic schist which has probably been derived from basic tuff. It consists principally of, actinolite plagioclase (oligoclase-albite) and quartz. Actinolite is subhedral,

probably changed from hornblende (?). Plagioclase is subhedral to anhedral, interstitial between actinolite crystals. Quartz is anhedral interstitial between actinolite and plagioclase crystals, and often broken into subgrains. A small amount of opaque mineral (ilmenite?) occurs, and is partly altered to leucosene. Quartz and goethite veinlet are recognized.

(6)

Sample No. : AB1101

Locality : Olon Ovoot

Rock name : Altered basalt

Observation note :

This specimen is dark grey altered basalt with phenocrysts of plagioclase (andesine), olivine (pseudomorph) and apatite, showing an intersertal texture. Plagioclase phenocryst is prismatic, up to 0.2mm in length, and has glass inclusions. Olivine phenocryst is euhedral, up to 0.1mm in length, and is wholly altered to iddingsite and clay minerals. Apatite phenocryst is euhedral, up to 0.1mm in length. Groundmass consists principally of lath-shaped plagioclase, glass and crystallite, and subordinately of opaque minerals.

(7)

Sample No. : HB1011

Locality : Onh

Rock name : Granite

Observation note :

This specimen is pale yellowish grey, medium-grained granite. It consists of quartz, K-feldspar (perthite), plagioclase (oligoclase), biotite and a small amount of opaque minerals, zircon and apatite. Quartz occurs as anhedral crystals, 0.1-1mm across. K-feldspar occurs as anhedral crystals, 0.1-2mm across, partly with indistinct microcline texture. Quartz and K-feldspar partly show micrographic texture. Plagioclase occurs as subhedral to anhedral crystals, up to 0.1mm across, associated with quartz and K-feldspar. Both K-feldspar and plagioclase are partly replaced by sericite crystals.

(8)

Sample No. : AB1802

Locality : Soirig

Rock name : Granite porphyry

Observation note :

This specimen is greyish white, medium-grained, granite porphyry with phenocrysts of quartz, plagioclase, K-feldspar, biotite and hornblende. Quartz phenocryst is up to 2mm across, and is often embayed by groundmass. Plagioclase phenocryst is up to 2mm across. K-feldspar phenocryst is anhedral, up to 2mm across, often showing a microcline texture. Both plagioclase and K-feldspar are partly altered to sericite. Hornblende phenocryst is up to 0.5mm in length, showing a distinct cleavage, and partly replaced by sericite. Biotite phenocryst is up to 0.3mm across, commonly destroyed, and partly changed into chlorite. Groundmass consists principally of quartz and K-feldspar and subordinately of plagioclase and biotite.

(9)

Sample No. : AB1701

Locality : Soirig

Rock name : Granite

Observation note :

This specimen is brownish grey, medium-grained granite. It consists of

quartz, plagioclase (oligoclase), K-feldspar (orthoclase-perthite), biotite, hornblende and a small amount of opaque minerals, sphene, zircon, apatite and epidote. Quartz occurs as anhedral, up to 2mm across, and is changed into subgrains which show sutured texture. Plagioclase occurs as euhedral to subhedral short prismatic crystals, up to 1.5mm in length. K-feldspar occurs as anhedral interstitial crystals with up to 2mm across between plagioclase and quartz crystals. Both plagioclase and K-feldspar are commonly replaced by anhedral sericite crystals. Biotite occurs as subhedral, up to 0.5mm in length, and is commonly altered to chlorite. Hornblende occurs as euhedral, up to 0.3mm in length.

(10)

Sample No. : A81804  
Locality : Soirig  
Rock name : Rhyolite  
Observation note :

This specimen is purplish dark grey rhyolite with phenocrysts of plagioclase (oligoclase) and quartz. Plagioclase phenocryst is clouded by dusty materials, up to 1mm in length. Quartz phenocryst is up to 0.5mm in length and embayed by groundmass. Groundmass, showing microcrystalline to cryptocrystalline texture, consists of plagioclase, quartz, biotite and a small amount of opaque mineral, sphene, zircon and apatite. Biotite mostly is replaced by sericite.

(11)

Sample No. : A81901  
Locality : Sologoi  
Rock name : Granophyre  
Observation note :

This specimen is light grey granophyre with a small amount of K-feldspar (orthoclase-perthite) and plagioclase phenocrysts. K-feldspar phenocryst is euhedral to subhedral short prismatic crystals, up to 0.8mm in length, sometimes showing a Carlsbad twinning. Groundmass, mostly smaller than 0.1mm, consists principally of K-feldspar and quartz, conspicuously a micrographic intergrowth, and subordinately of biotite and plagioclase. Biotite is partly altered to chlorite.

(12)

Sample No. : A82301  
Locality : Sologoi  
Rock name : Nepheline dolerite  
Observation note :

This specimen is dark grey nepheline dolerite, with plagioclase phenocrysts. Plagioclase (labradorite) phenocryst is euhedral prismatic crystal, 0.5-1mm in length. Groundmass shows an intersertal texture and consists principally of nepheline, glass and opaque minerals and subordinately of biotite and amphibole. Nepheline is anhedral crystal up to 0.5mm across, and commonly replaced by carbonate minerals. Biotite is subhedral crystal up to 0.3mm across, and considerably is altered to chlorite. Amphibole is euhedral to subhedral crystal up to 0.3mm across, and wholly changed into opacite.

(13)

Sample No. : A82302  
Locality : Sologoi  
Rock name : Granite  
Observation note :

This specimen is greyish white, medium-grained granite with a



cataclastic deformation. It consists of K-feldspar (orthoclase-microperthite), quartz, plagioclase (oligoclase), muscovite, tourmaline and a small amount of opaque mineral and apatite. Quartz occurs as anhedral crystals, up to 0.5mm across, and is changed into subgrains which show sutured texture. K-feldspar occurs as anhedral crystals, up to 0.5mm across. Plagioclase occurs as subhedral to anhedral crystals, up to 0.3mm across, and is commonly altered to sericite. Muscovite occurs as euhedral to subhedral crystals, up to 0.5mm in length. Tourmaline occurs as short prismatic euhedral crystals, 0.3-0.8mm in length.

(14)

Sample No. : A90101  
Locality : Tahilga Uula  
Rock name : Dacite  
Observation note :

This specimen is grey dacite with phenocrysts of corroded quartz, plagioclase, biotite and apatite. Quartz phenocryst is up to 5mm in length. Plagioclase phenocryst is up to 0.8mm in length. Biotite phenocryst is up to 0.3mm in length. Apatite phenocryst is up to 0.5mm in length. Ground-mass, showing cryptocrystalline texture, consists of quartz, plagioclase, apatite and a small amount of opaque mineral and zircon. Sericite is observed as secondary minerals.

(15)

Sample No. : A90103  
Locality : Tahilga Uula  
Rock name : Diorite  
Observation note :

This specimen is grey, medium-grained diorite, showing a holocrystalline texture. It consists principally of plagioclase and hornblende (or kaersutite) and subordinately quartz, biotite (pseudomorph), sphene, epidote, chlorite and actinolite. Plagioclase occurs as euhedral prismatic clouded crystals, 0.2-0.5mm in length. Hornblende occurs as anhedral crystals, interstitial between plagioclase crystals, 0.3-0.5mm across and partly changed into actinolite or epidote. Biotite occurs as subhedral crystals, up to 0.2mm, and is wholly replaced by chlorite.

(16)

Sample No. : A90104  
Locality : Tahilga Uula  
Rock name : Granite  
Observation note :

This specimen is pinkish white, coarse-grained granite with a cataclastic deformation. It consists of quartz, plagioclase (oligoclase), K-feldspar (orthoclase-perthite), biotite and a small amount of muscovite (?), opaque mineral, zircon and apatite. Quartz occurs as anhedral, up to 8mm across, and is changed into subgrains which show sutured texture. Plagioclase occurs as euhedral to subhedral short prismatic crystals, up to 2mm in length. K-feldspar occurs as anhedral interstitial crystals with up to 5mm across between quartz and plagioclase crystals. Both plagioclase and K-feldspar are commonly replaced by sericite crystals. Biotite occurs as subhedral, up to 0.5mm in length, and is partly altered to chlorite.

(17)

Sample No. : A81501  
Locality : Tsagaan Uula  
Rock name : Andesite  
Observation note :

This specimen is brownish grey andesite with phenocrysts of plagioclase, augite, olivine (pseudomorph) and apatite. Plagioclase phenocryst is prismatic, up to 3mm in length. Augite phenocryst is short prismatic, up to 1mm in length, and embayed by groundmass. Olivine phenocryst is euhedral, up to 0.5mm in length, and is wholly altered to iddingsite. Apatite phenocryst is euhedral up to 0.5mm in length. Groundmass, showing a hyalopilitic texture, consists principally of lath-shaped plagioclase, glass and crystallite and subordinately of apatite, augite and opaque mineral. Carbonate mineral, goethite and quartz veinlets are recognized.

(18)

Sample No. : A81502  
Locality : Tsagaan Uula  
Rock name : Meta-gabbro  
Observation note :

This specimen is dark greenish grey, medium-grained meta-gabbro, showing an ophitic texture. It consists principally of plagioclase (labradorite) and hornblende and subordinately augite. Plagioclase occurs as euhedral prismatic crystals, 0.5-1mm in length. Hornblende occurs as anhedral crystals, up to 0.5mm across, and is partly changed into actinolite and scaly biotite. Sphene is observed as secondary mineral.

(19)

Sample No. : A82503  
Locality : Undur Uda  
Rock name : Tonalite  
Observation note :

This specimen is greenish white, medium-grained gneissose tonalite. It consists of quartz, plagioclase and muscovite with accessory biotite, zircon, apatite and opaque mineral. Quartz is anhedral crystal, up to 1.5mm across. Plagioclase is primary subhedral crystal, up to 2.5mm in length, but it is considerably distorted and deformed. Muscovite is euhedral to subhedral crystal, up to 0.8mm in length. Biotite is subhedral crystal, up to 0.5mm in length and commonly altered to chlorite.

(20)

Sample No. : A82504  
Locality : Undur Uda  
Rock name : Porphyrite  
Observation note :

This specimen is light grey porphyrite. It consists principally of plagioclase and subordinately of quartz and apatite. Plagioclase occurs as euhedral to subhedral, up to 1mm in length, and partly shows porphyritic and spherulitic texture. Quartz occurs as subhedral to anhedral, 0.1-0.2mm across. Apatite occurs as euhedral to subhedral, up to 0.1mm in length.

(21)

Sample No. : OH70503  
Locality : Olon Ovoot  
Rock name : Nepheline basalt  
Observation note :

This specimen is greenish grey nepheline basalt with olivine (pseudomorph), augite (Ti-augite) and nepheline phenocrysts. Olivine phenocryst is up to 0.5mm in length, and is wholly changed into iddingsite and clay mineral. Augite phenocryst is up to 0.2mm in length. Nepheline phenocryst is up to 0.2mm in length. Groundmass consists principally of

augite and subordinately of phlogopite. Large amount of zeolite are recognized as secondary mineral(?).

(22)

Sample No. : OS62403

Locality : Olon Ovoot

Rock name : Meta-gabbro

Observation note :

This specimen is dark greenish grey, medium-grained meta-gabbro, showing hollocrystalline texture. It consists principally of plagioclase (labradorite-andesine), hornblende and opaque mineral. Plagioclase occurs as subhedral to anhedral crystals, up to 1mm across. Hornblende occurs as anhedral crystals, up to 1mm across, and is partly replaced by actinolite. A small amount of opaque mineral (ilmenite?) occurs, and is partly altered to leucoxene. Large amount of epidote, 0.1-0.3mm across, occurs as secondary minerals.

(23)

Sample No. : OA62904

Locality : Olon Ovoot

Rock name : Fine-sandstone

Observation note :

This specimen is greenish grey fine-sandstone. It consists principally of quartz and a small amount of muscovite and opaque mineral. These grains are poorly sorted and subrounded. Fine-sandstone is undergone chlorite and sericite alteration.

(24)

Sample No. : O124750

Locality : Olon Ovoot

Rock name : Quartz gabbro

Observation note :

This specimen is greenish grey quartz gabbro, showing a hollocrystalline texture. It consists principally of plagioclase and hornblende and subordinately of quartz and opaque mineral. Plagioclase occurs as subhedral crystals, up to 0.8mm in length. Hornblende occurs as anhedral crystals, up to 1mm across, and is partly changed into fibrous actinolite. Quartz occurs anhedral crystals, up to 0.5mm across. Opaque mineral occurs as euhedral to subhedral, up to 0.3mm in length. Large amount of epidote, up to 0.3mm across, occurs as secondary mineral.

(25)

Sample No. : OH70504

Locality : Olon Ovoot

Rock name : Nepheline basalt

Observation note :

This specimen is grey nepheline basalt with augite, apatite, opaque mineral, biotite and phlogopite phenocrysts. Augite phenocryst is up to 2mm in length, and is embayed by groundmass. Apatite phenocryst is up to 0.8mm in length. Biotite phenocryst is up to 0.2mm in length, and is commonly surrounded by phlogopite. Phlogopite phenocryst is up to 0.2mm across. Groundmass consists of nepheline, K-feldspar and augite, mostly smaller than 0.05mm. Large amount of epidote, up to 0.06mm across, occurs as secondary mineral.

(26)

Sample No. : OS70403

Locality : Olon Ovoot

**Rock name** : Meta-quartz diolite

**Observation note** :

This specimen is greenish grey, fine-grained meta-quartz diolite. It consists of quartz, plagioclase, opaque mineral and K-feldspar. Quartz occurs as anhedral, up to 0.3mm across. Plagioclase occurs as subhedral, up to 0.5mm in length. K-feldspar occurs as anhedral, up to 0.3mm across. Quartz occurs as anhedral, up to 0.3mm across. Large amount of chlorite and epidote occurs as secondary mineral interstitially among plagioclase, K-feldspar and quartz crystals.

(27)

**Sample No.** : 0044300

**Locality** : Olon Ovoot

**Rock name** : Tourmaline rock

**Observation note** :

This specimen is greenish brown tourmaline rock. It consists principally of tourmaline and subordinately of quartz, plagioclase and K-feldspar. Tourmaline occurs as euhedral acicular crystal aggregate. Plagioclase occurs as subhedral to anhedral crystals, up to 0.4mm across. K-feldspar occurs as anhedral crystals, up to 0.5 across. Quartz occurs as anhedral crystals, up to 0.3mm across. This rock is injected by goethite, quartz and carbonate veinlets.

(28)

**Sample No.** : 0290675

**Locality** : Olon Ovoot

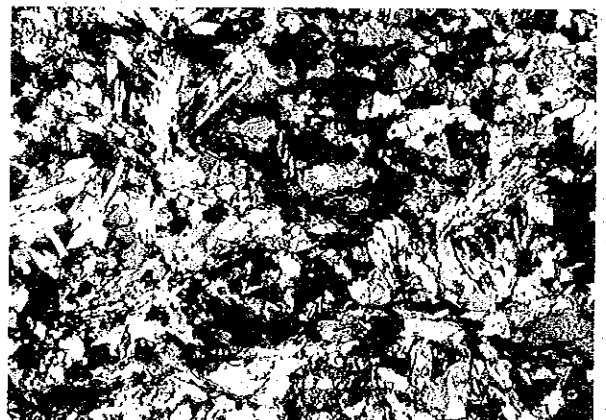
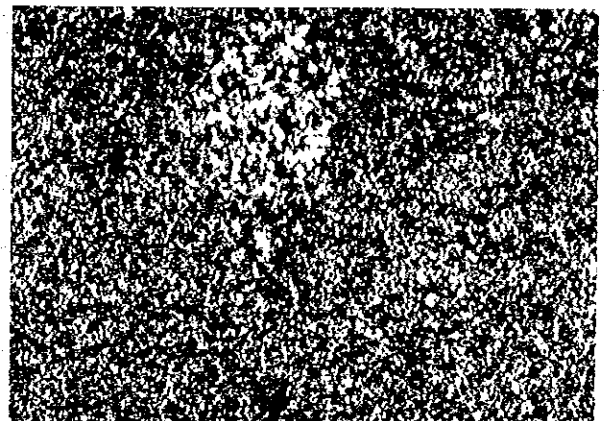
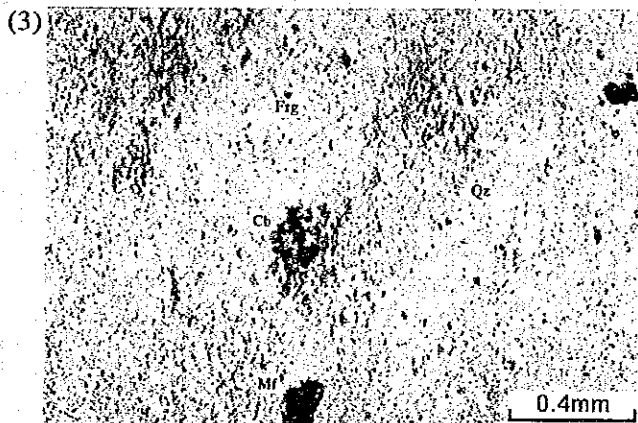
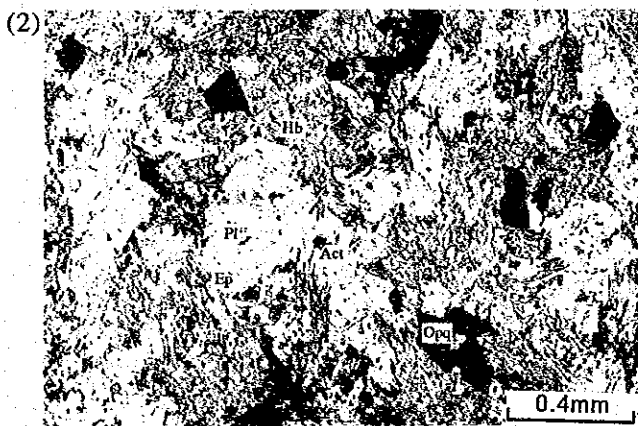
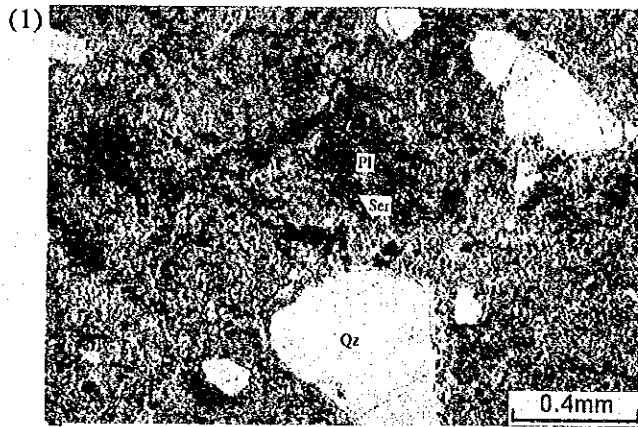
**Rock name** : Meta-tonalite

**Observation note** :

This specimen is greyish brown, medium-grained meta-tonalite. It consists principally of plagioclase, quartz and opaque mineral. Plagioclase occurs as euhedral to subhedral crystals, up to 0.8mm in length. Quartz occurs as anhedral crystals, up to 0.5mm across, interstitially between plagioclase crystals or embays plagioclase crystals. This rock is injected many goethite veinlets.

Plane polarized light

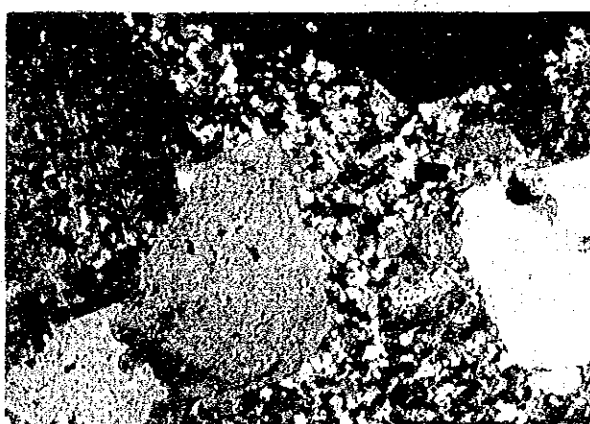
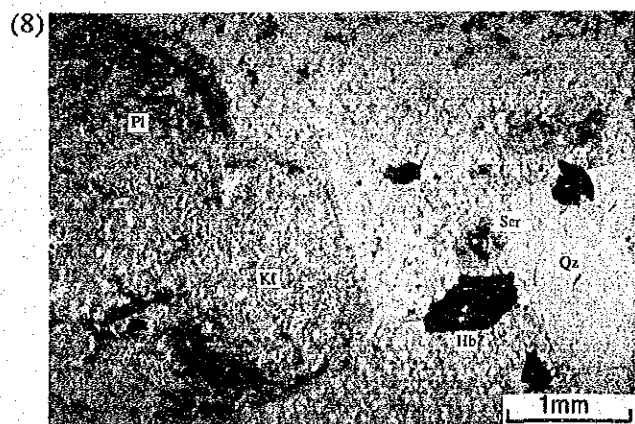
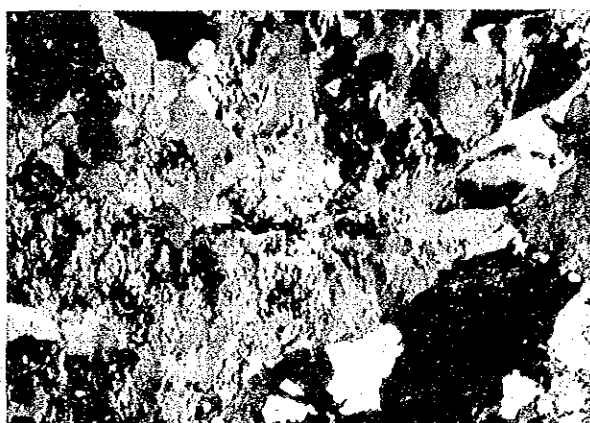
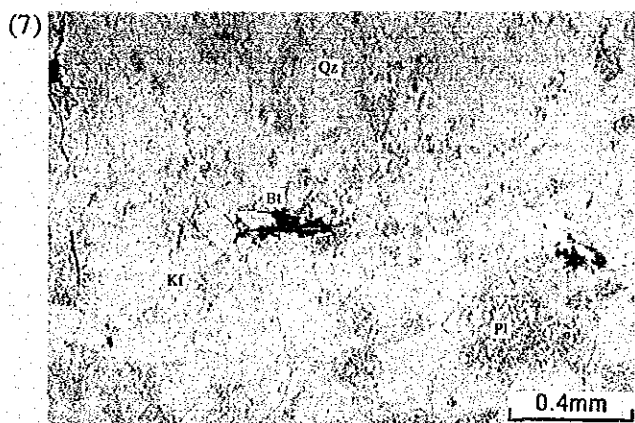
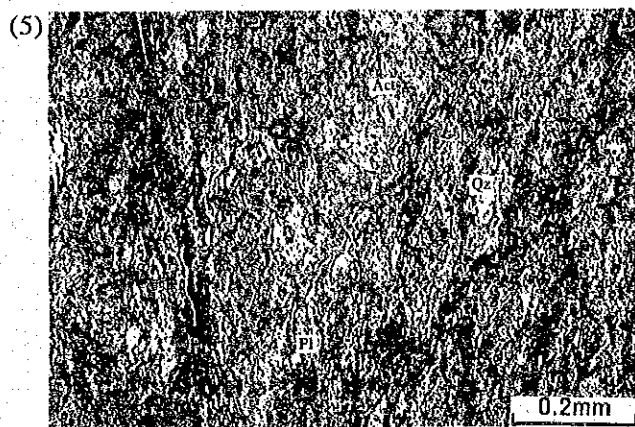
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Plane polarized light

Crossed polarized light

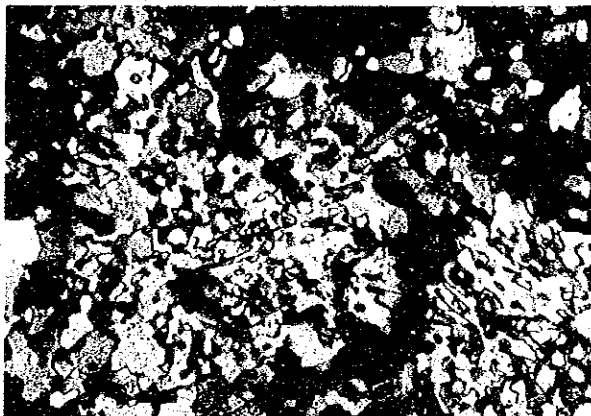
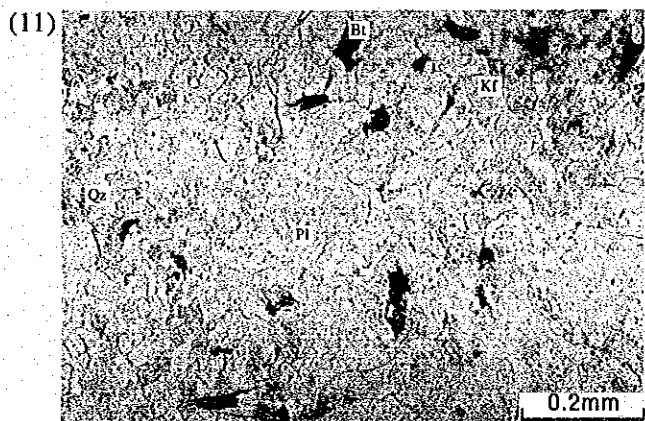
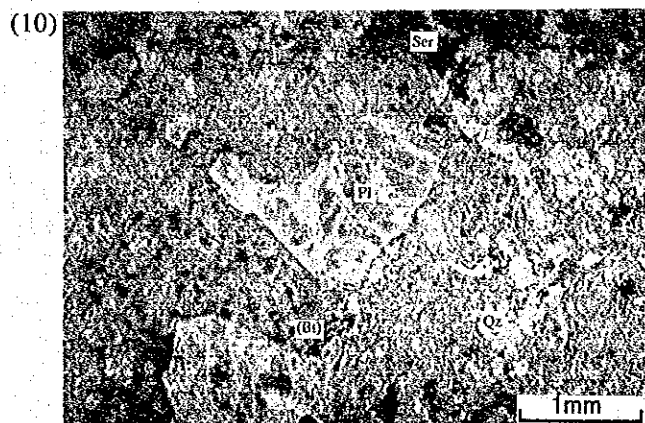






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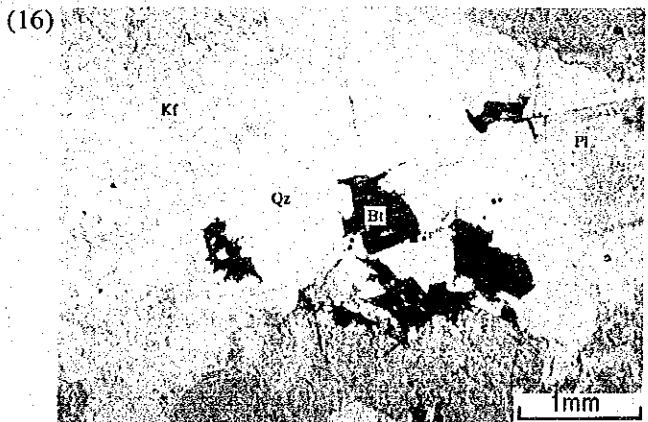
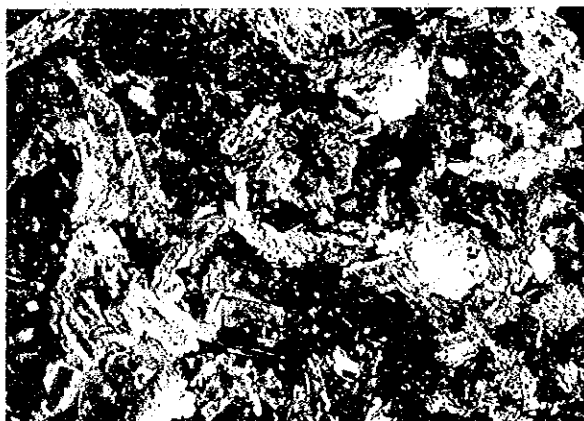
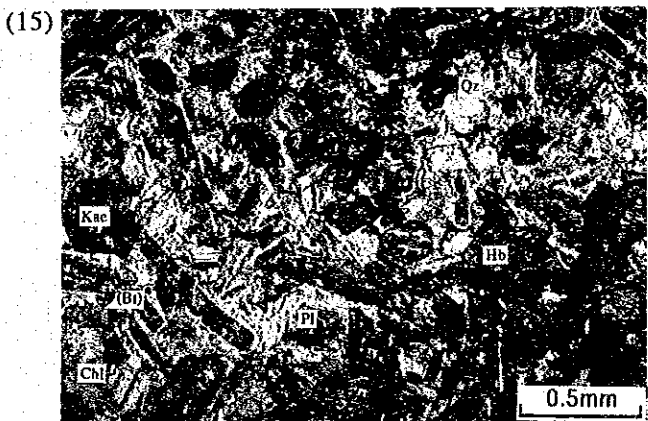
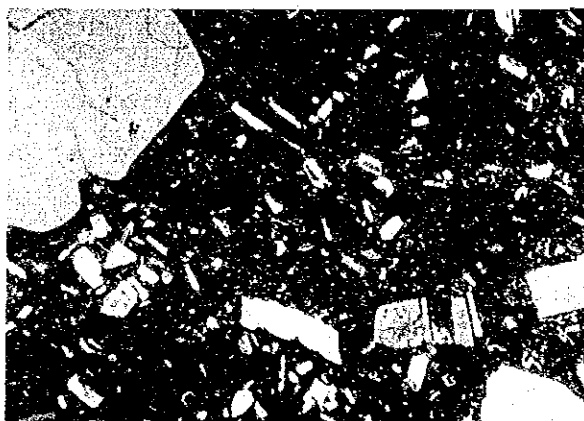
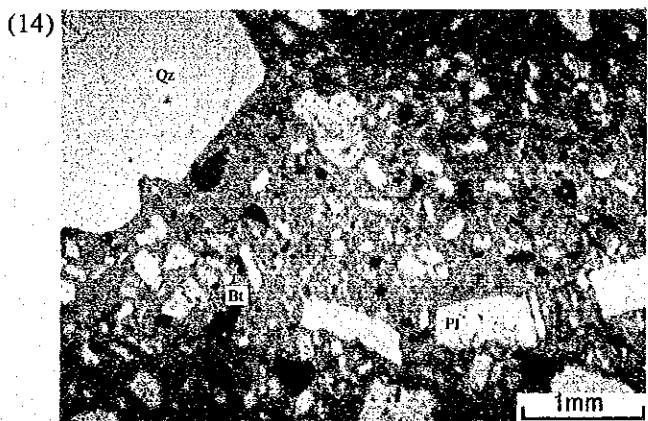
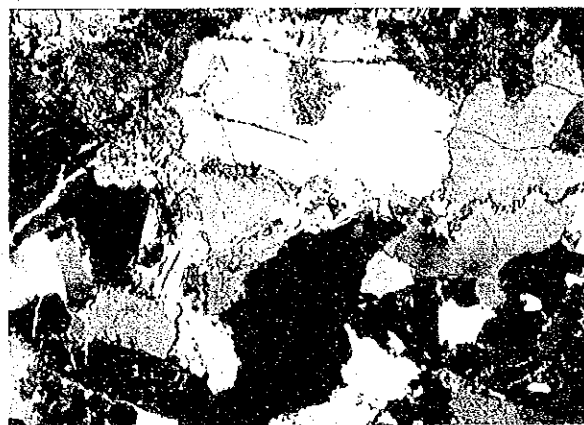
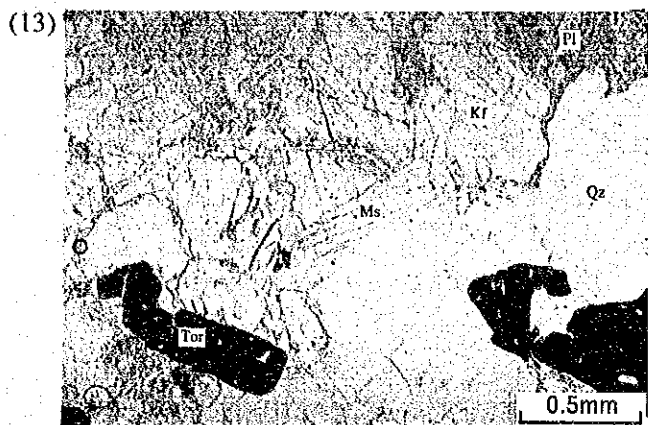
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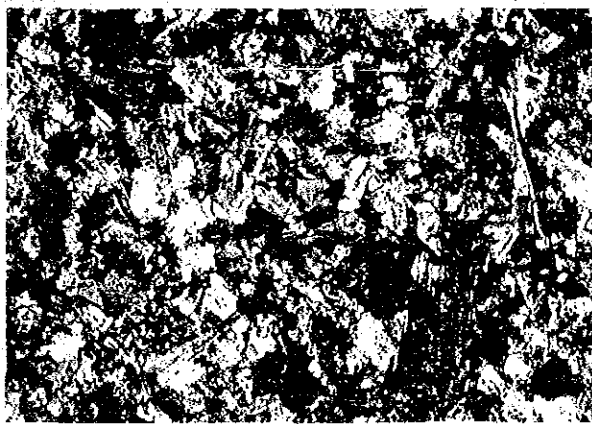
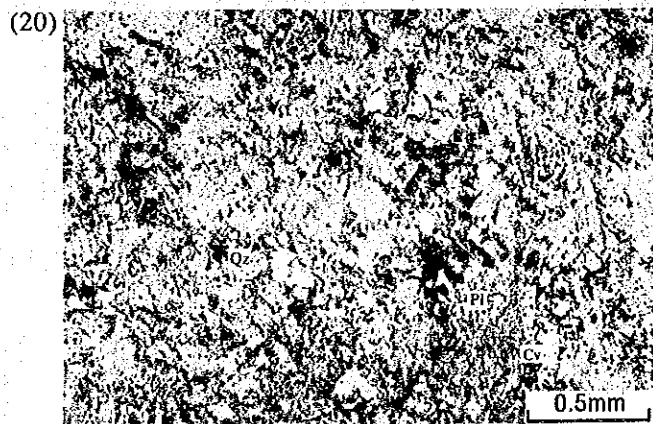
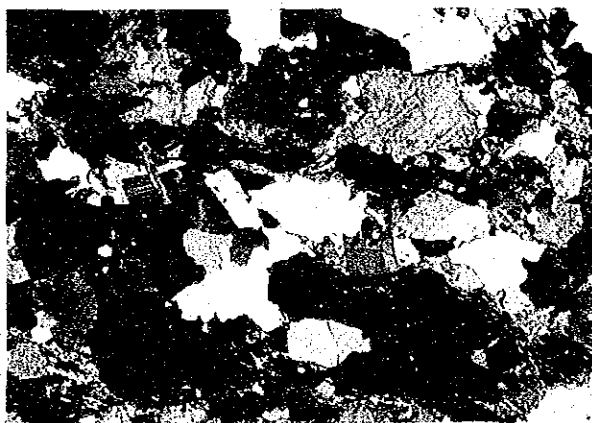
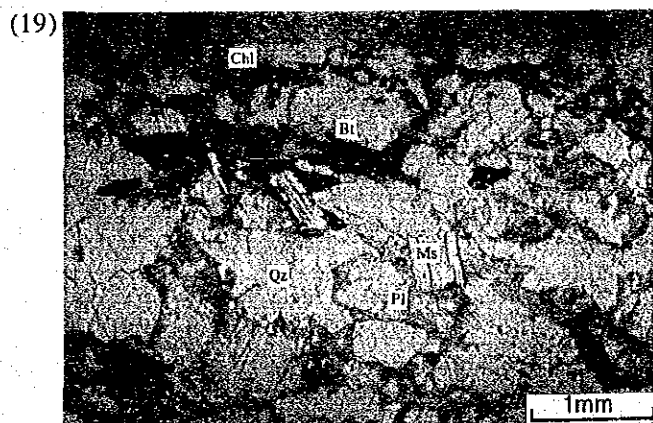
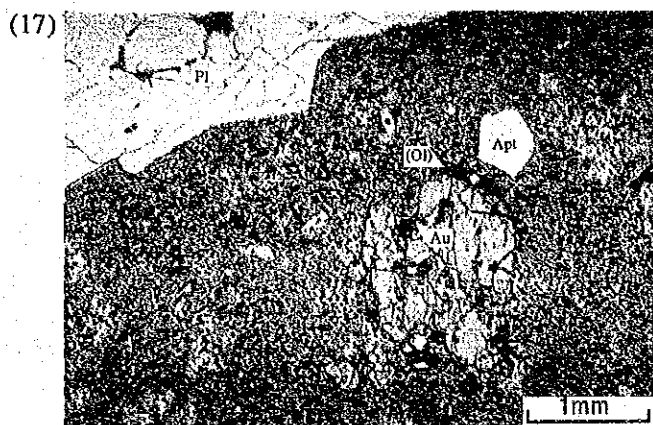
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Plane polarized light

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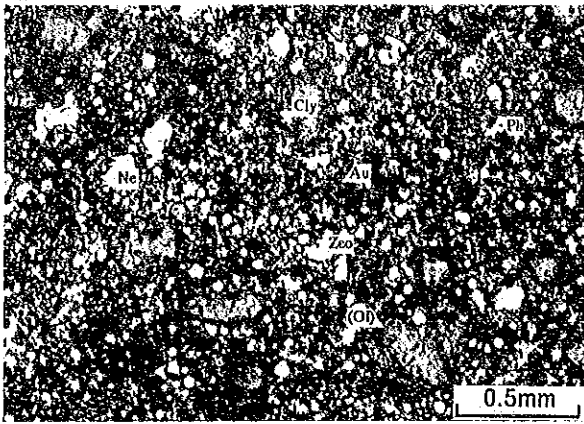




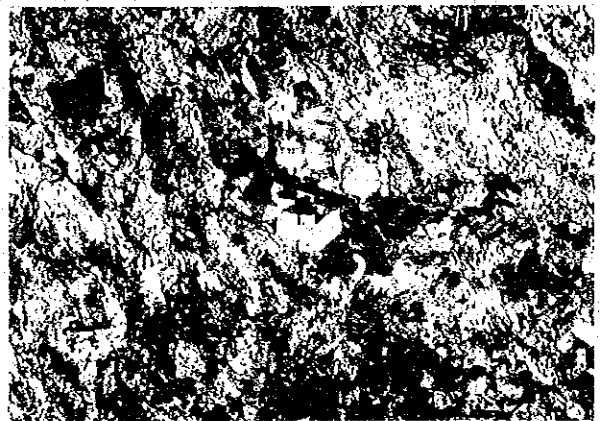
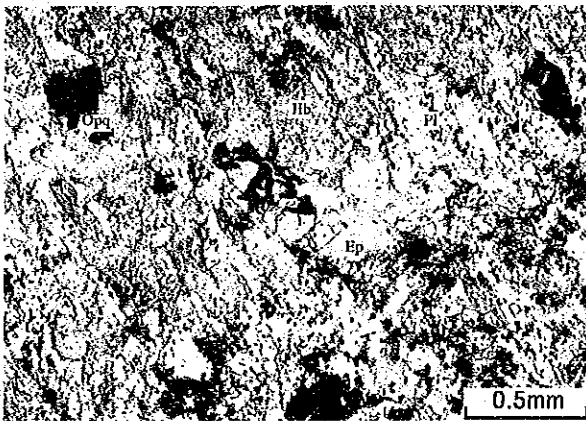
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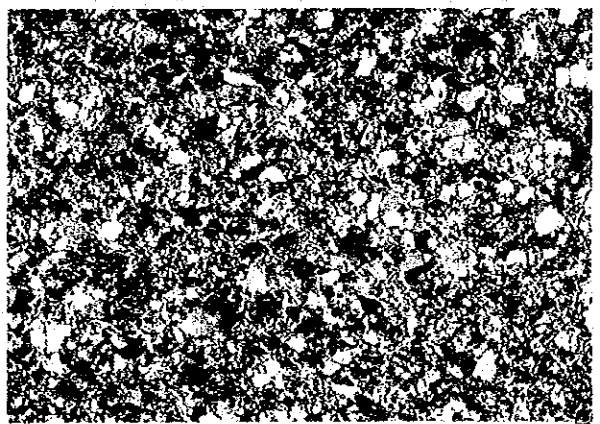
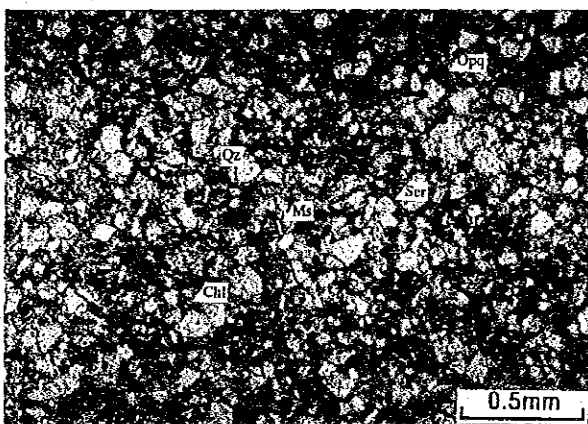
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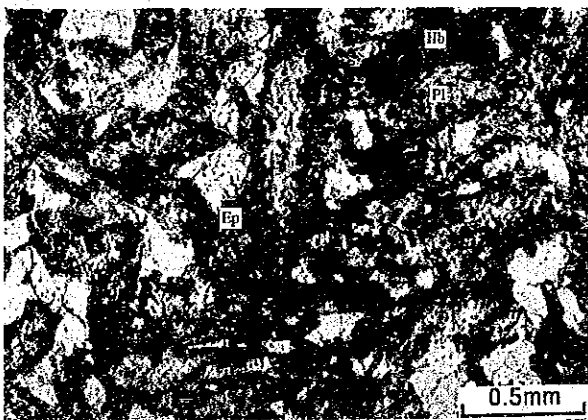
(22)



(23)



(24)







Plane polarized light

Crossed polarized light

