

TABLE 1.—Continued

Run No.	Bulk Composition	Material	wt % H ₂ O	Temp °C	Pressure Bars	Duration Days	Product
320	2Li ₂ O Al ₂ O ₃ 4SiO ₂	Kaolin + Li ₂ CO ₃		300	2000	6	Bikitaite
312	" " "	gel + Li ₂ CO ₃	leaked	300	2500	30	Bikitaite
480	Tin Mt quartz + spodumene assemblage	" "	50%	300	2000	7	Bikitaite + quartz
247	2Li ₂ O Al ₂ O ₃ 4SiO ₂	gel + Li ₂ CO ₃	50%	300	1000	6	Zeolite A + bikitaite
333	2Li ₂ O Al ₂ O ₃ 4SiO ₂	Kaolin + Li ₂ CO ₃	50%	350	2000	5	β Spodumene + bikitaite
340	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	50%	350	2000	5	β Spodumene + bikitaite
338	2Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	50%	350	2000	5	β Spodumene + bikitaite
258	2Li ₂ O Al ₂ O ₃ 4SiO ₂	gel + Li ₂ CO ₃	50%	350	2000	5	β Spodumene + eucryptite+ bikitaite

Other runs at 350° yielded β spodumene, sometimes with eucryptite, petalite and zeolite A.

BIKITAITE

TABLE 2

Synthesis of zeolite species A

Run No.	Bulk Composition	Material	wt % H ₂ O	Temp °C	Pressure Bars	Duration Days	Product
275	2Li ₂ O Al ₂ O ₃ 4SiO ₂	gel + LiOH	10	300	2000	12	zeolite A
274	2Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	46	300	2000	11	" "
242	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	10	300	1000	4	" "
243	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	open	300	1000	4	" "
244	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	50	300	1000	6	" "
276	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	50	300	2000	12	" "
277	Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	10	300	2000	8	" "
288	2Li ₂ O Al ₂ O ₃ 4SiO ₂	gel + Li ₂ CO ₃	leaked	300	2000	30	zeolite A + quartz
257	2Li ₂ O Al ₂ O ₃ 4SiO ₂	" "	50	350	1000		β spodumene + zeolite A
332	2Li ₂ O Al ₂ O ₃ 4SiO ₂	Kaolin + LiOH	50	300	2000	5	zeolite A + quartz
457	1Li ₂ O Al ₂ O ₃ 4SiO ₂	Organic + LiOH	50	300	2000	8	β spodumene + zeolite A