COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Lithium bromate; $LiBrO_3$; [13550-28-2] (2) Sodium bromate; $NaBrO_3$; [7789-38-0] (3) Water; H_2O; [7732-18-5]	Campbell, A.N.; Kartzmark, E.M.; Musbally, G.M. *Can. J. Chem.* 1967, *45*, 803-6.
VARIABLES: Composition at 298.15 K	**PREPARED BY:** Hiroshi Miyamoto

EXPERIMENTAL VALUES: Composition of Saturated Solutions at 25.00°C

Lithium Bromate mass %	Lithium Bromate mol % (compiler)	Sodium Bromate mass %	Sodium Bromate mol % (compiler)	Nature of the solid phase
0	0	28.43[a]	4.528	$NaBrO_3$
65.64[a]	20.33	-	-	$LiBrO_3.H_2O$
49.97	12.35	3.02	0.667	$LiBrO_3.H_2O$ + $NaBrO_3$

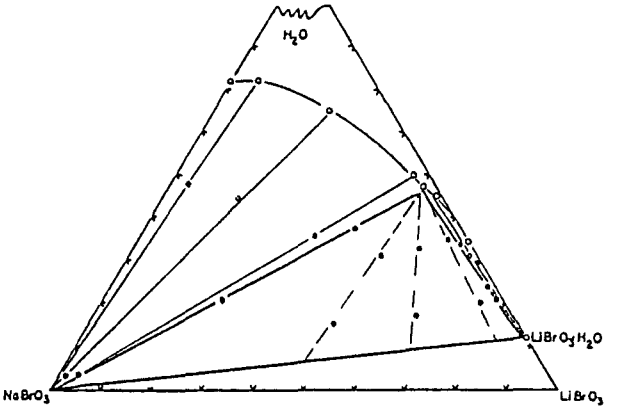
[a]For the binary systems the compiler computes the following:

soly of $LiBrO_3$: 14.17 mol kg^{-1}

soly of $NaBrO_3$: 2.632 mol kg^{-1}

COMMENTS AND/OR ADDITIONAL DATA:

The phase diagram is given in units of mass %.



AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Ternary mixtures were stirred for 48 hours.

The bromate content was determined iodometrically, and the alkali metal by flame photometry. To determine the nature of the solid phase, the wet residue method of Schreinemakers was used.

SOURCE AND PURITY OF MATERIALS:

$LiBrO_3$ and $NaBrO_3$ were certified reagents, and they were dried at 100° C.

ESTIMATED ERROR:

Soly: precision within 1 % (compiler).

Temp: precision ± 0.01° K (authors).

REFERENCES:

COMPONENTS:	ORIGINAL MEASUREMENTS:
(1) Lithium sulfate; Li_2SO_4; [13453-87-7] (2) Lithium bromate; $LiBrO_3$; [13550-28-2] (3) Water; H_2O; [7732-18-5]	Campbell, A.N.; Kartzmark, E.M.; Musbally, G.M. *Can. J. Chem.* 1967, 45, 803-6.
VARIABLES: Composition at 298.15 K	**PREPARED BY:** Hiroshi Miyamoto

EXPERIMENTAL VALUES: Composition of Saturated Solutions at 25.00°C

Lithium Sulfate		Lithium Bromate		Nature of the solid phase
mass %	mol % (compiler)	mass %	mol % (compiler)	
25.50	5.311	-		$Li_2SO_4.H_2O$
-	-	65.64[b]	20.33	$LiBrO_3.H_2O$
2.82	0.810	46.87	10.98	a

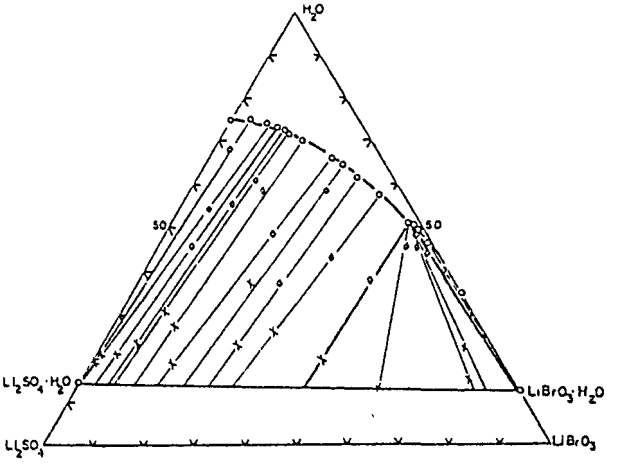
[a] $LiBrO_3.H_2O$ and the solid solution of $LiBrO_3.H_2O$ in $Li_2SO_4.H_2O$ containing 42 mass % Li_2SO_4, 45 mass % $LiBrO_3$ and 13 mass % H_2O.

[b] For the binary system, the compiler computed the following:

soly of $LiBrO_3$ = 14.17 mol kg^{-1}

COMMENTS AND/OR ADDITIONAL DATA:

The phase diagram is given to the right is based on mass % units.



AUXILIARY INFORMATION

METHOD/APPARATUS/PROCEDURE:

Ternary complexes were stirred for 48 hours.

The bromate content was determined iodometrically, and the alkali metal by flame photometry. To determine the nature of the solid phase, the wet residue method of Schreinemakers was used.

SOURCE AND PURITY OF MATERIALS:

$LiBrO_3$ and $Li_2SO_4.H_2O$ were certified reagents. $LiBrO_3$ was dried at 100°C and $Li_2SO_4.H_2O$ was used without further purification.

ESTIMATED ERROR:

Soly: precision within 1 % (compiler).
Temp: precision ± 0.01 K (authors).

REFERENCES: