Table 1
Properties of crystal hydrates, depending on the atomic number of the metal element that forms them [10], [11].

Atomic number of the element	Composition of crystal hydrate	Solubility of the anhydrous salt in water (g / 100cm^3) 20^{o}C	Mass fraction of crystallization water in crystal hydrates,%	Molar mass of crystal hydrate
3	$Li_3PO_4 \bullet 12H_2O$	0,022	66	332
11	$Na_3PO_4 \bullet 12H_2O$	12	57	380
19	$K_3PO_4 \bullet 7H_2O$	90	37	338
37	$Rb_3PO_4 \bullet 4H_2O$	220	17	423
55	$Cs_3PO_4 \bullet 4H_2O$	340	13	566

Table 2
Dependence of logarithmic alkali dissociation constants for the reaction $MOH \leftrightarrow M^+ + OH^-$ from the number of the chemical element in the periodic table.

Alkali	LiOH	NaOH	KOH	RbOH	CsOH	OH^-
Pk_b	0,18	-0,5	-0,8	-1,4	-1,76	-1,76

Table 3
Dependence of the crystal hydrate dehydration temperature form the nature of the metal element that forms it

Substance	Melting in crystalline water	T of full drying, °C
$Li_3PO_4 \bullet 12H_2O$	No	120
$Na_3PO_4 \bullet 12H_2O$	Yes	145
$K_3PO_4 \bullet 7H_2O$	Yes	340
$Rb_3PO_4 \bullet 4H_2O$	Yes (with the marked hydrolysis)	530
$Cs_3PO_4 \bullet 4H_2O$	Yes (with the marked hydrolysis)	≈800, but the remaining water were observed at higher temperatures