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SEM XRD, XRF

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BX-60

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(XRF) X



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(Au Ag

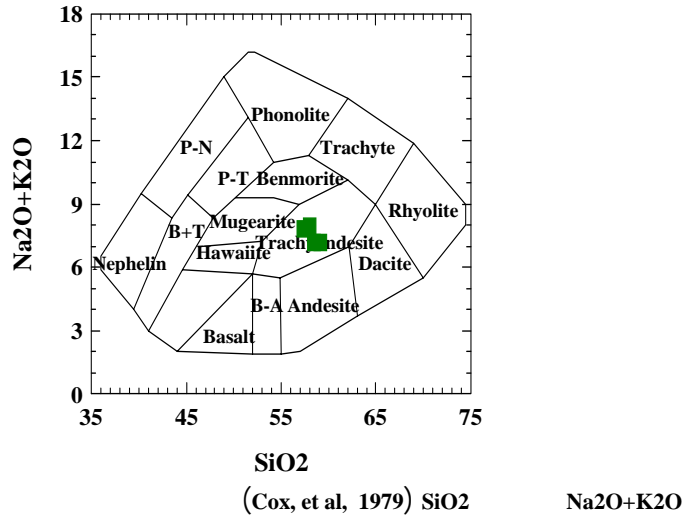
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Sample	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MgO	CaO	Na ₂ O	K ₂ O	TiO ₂	P ₂ O ₅
344	58.01	16.45	4.69	3.25	5.25	4.54	3.39	1.78	0.13
345	59.16	16.86	4.82	2.33	4.68	4.09	3.04	0.815	0.15
346	58.44	16.36	4.11	3.30	4.24	4.11	3.06	1.36	0.31
347	57.36	16.07	7.47	3.72	4.45	4.33	3.46	0.90	0.11



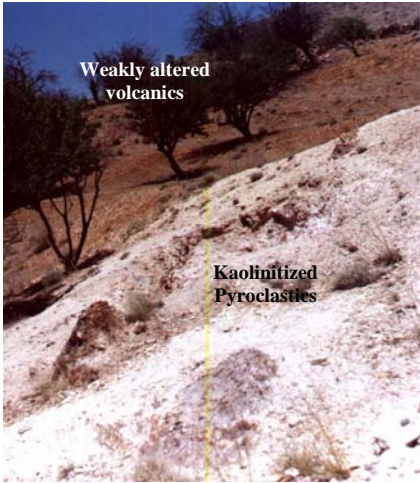
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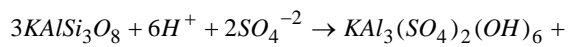
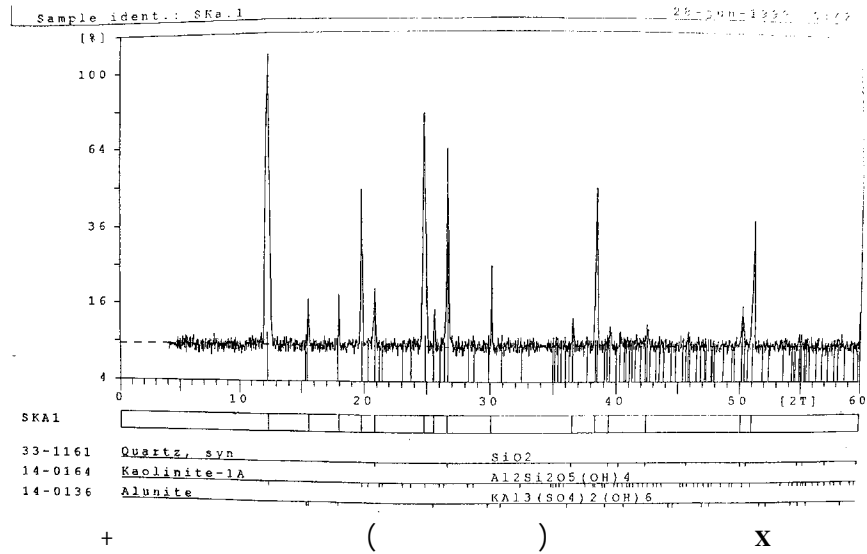
(pseudomorph) ()

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- 1. relicts
 - 2. ghost texture
 - 3. disseminated

XRD

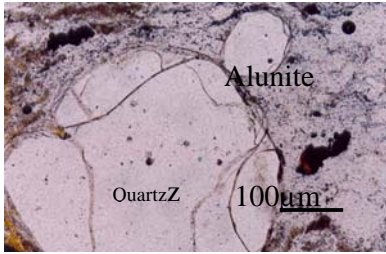
Sample	Area	Index mineral	Associated minerals
K-1	East Keshehh	Kaolinite	Quartz+ Anataz+ Illite
K-2	East Keshehh	Jarosite	Quartz+ Clay minerals
K-3	North East Kesheh	Kaolinite	Quartz
K-4	North East Kesheh	Kaolinite	Quartz +Hematite +Calcite
K-5	North of Kesheh	Alunite	Rutile + Quartz + Kaolinite
K-6	North of Kesheh	Alunite	Quartz + Kaolinte
K-7	Kesheh	Kaolinite	Quartz + Alunite
K-8	Kesheh	Kaolinite	Quartz + Alunite + hematite
K-9	Kesheh	Kaolinite	Quartz + Alunite



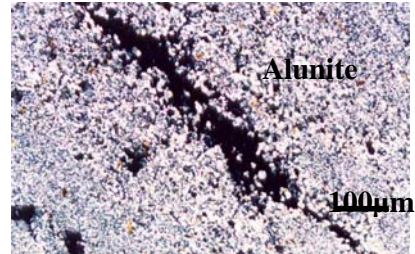
2K⁺ + 9SiO₂
k-feldspar

alunite

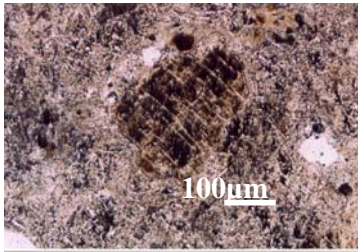
SiO₂



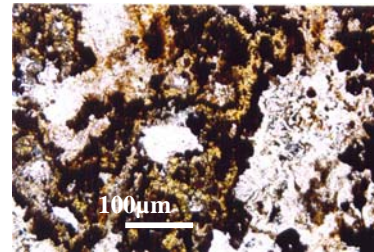
.(PPL . 50)



.(XPL . 50)



.(XPL . 50)



.(XPL . 50)

Si_{0.075} Al_{0.94} Mg_{0.008} Ca_{0.003} Na_{0.11} K_{0.14} Ti₀ P_{0.003} S_{1.3} (OH)₀₋₄₇

Na₂O

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(% /)

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(natroalunite)

K-1,

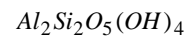
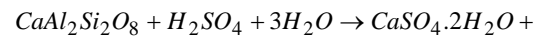
K-4, K-7

Al₂O₃

:(Kelepertsis, 1989)

MgO, CaO, Na₂O, K₂O

LOI



K-11, K-12 K-10

Fe₂O₃

anorthite

gypsum

kaolinite

K-10, K-

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Al S K,

(

11, K-12

Sample	SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	SO3	L.O.I
K-1	50.1	30	3.74	0.02	0.64	0.14	0.05	0.29	0.18	0.60	13.9
K-4	62.4	35.1	0.13	0.2	0.11	0.04	0.02	0.34	0.12	0.39	0.97
K-7	58.09	36.52	0.27	0.09	0.27	0.35	0.77	0.77	0.55	1.61	-
K-10	2.06	31.5	0.153	0.02	0.08	2.63	6.08	0.11	0.11	33.6	23.5
K-11	30.2	31.2	1.68	0.02	0.191	2.35	4.84	0.16	0.231	30.2	19.1
K-12	2.94	31.3	0.08	0.22	0.12	2.31	9	0.02	0.26	47.9	5.73

Sample	Zr	Ba	Ce	La	Y	V	Th	U	Cr	Zn	Nd	W	Hf	Nb	Ni	Ga	Rb	Sr
K-4	7	554	17	8	32.5	380	1	1	65	22	-	<1	-	22	2	7	8	414
K-7	40	446	48	0	0	272	3	29	37	13	26	0	39	10	10	19	9	427

/H⁺

Al

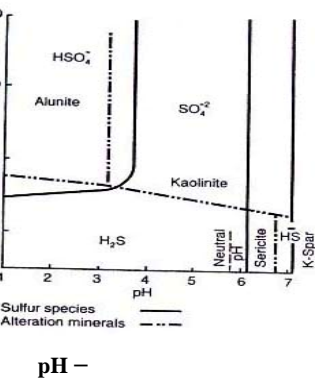
pH

(Dill, 2005)

(Dill, 2004)

Al

Na K, Mg, Ca



pH -

(Cunningham, et al, 1993)

(Maranda, 2003)

pH

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fO₂

H₂SO₄

(/)

pH

(Rye et al 1992)

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pH

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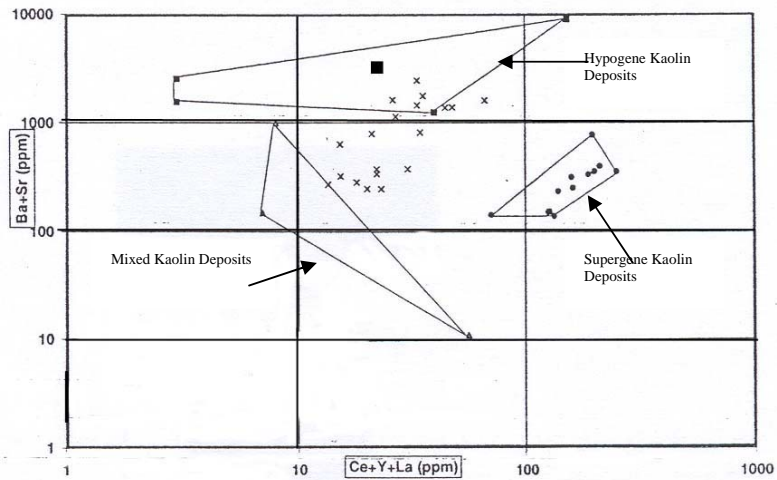
(Rye, 1995)

(Creasey, 1966)

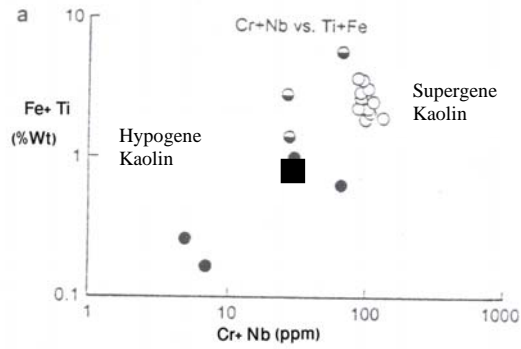
- 1 . steam-heated
- 2 . magmatic-steam
- 3 . supergene
- 4 . hypogene

(Jennifer,2004)

H2S



(Dill, 1997) (Ba+ Sr/ Ce + y + La (ppm))



(Dill, 1997)

Ba

Y La, Ce

XRF

(Dill et al 1997)

Fe + Ti / Cr + Nb

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Sr Ba

La Ce, Y

Nb Cr

(Dill, et. al 1997)

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Sr

Ce + Y + La / Ba+ Sr

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pH

pH

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