

GEMA*Lista de Items, al lado el número de ocurrencias de cada Item*El item explorado es: **FACIES**

TOTAL

APL	5
ENC	9
GD	36
GPB	16
LGD	2
MAB	20
MG	8
MGL	12
MZ	2
PA	4
PED	4
PGD	8
PR	5
RB	1
UM	1
AD	24

Quinceos

CARDENAS 1882?

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-46	74.82	0.12	14.14	0.00	0.91	0.37	0.01	0.81	2.97	4.77	0.14	0.83	99.89
SI0-56	76.23	0.08	13.18	0.00	0.64	0.15	0.01	0.42	2.98	5.14	0.06	1.02	99.91
SI0-58	76.72	0.06	13.14	0.00	0.54	0.08	0.06	0.60	2.71	5.42	0.04	0.60	99.97
SI0-63	77.36	0.06	12.88	0.00	0.55	0.05	0.01	0.60	2.76	5.20	0.03	0.43	99.93
SI0-2000	75.87	0.06	12.71	0.00	0.42	0.03	0.00	0.41	4.70	4.89	0.04	0.82	99.95

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-46	37.06	2.98	28.45	25.36	3.13					2.43		.23		.33	90.8	10.9
SI0-56	38.20	2.11	30.71	25.49	1.71					1.46		.15		.14	94.4	6.2
SI0-58	38.69	1.83	32.22	23.07	2.73					1.22		.11		.09	93.9	10.5
SI0-63	39.89	1.70	30.87	23.46	2.79					1.07		.11		.07	94.2	10.6
SI0-2000	30.55		29.21	38.56					1.45			.11		.09	98.3	

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-46		199	135	201	6	131	3	6		7	58			6	198	1.48
SI0-56		279	31	41	4	112		1		9	43	10		6	152	1.32
SI0-58		228	48	38	2	126		2		9	36	10		5	197	.79
SI0-63		219	28	14	2	97				6	61	10		4	197	.5
SI0-2000		220	8	10		147	5	4	3	4	39	5		5	184	1.25

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-19	64.48	0.70	15.92	0.00	4.69	3.34	0.09	3.94	3.55	2.50	0.25	0.70	100.16
SI0-26	56.44	0.91	16.29	0.00	6.52	5.92	0.16	5.09	3.32	3.07	0.23	1.40	99.35
SI0-44	59.15	0.76	15.76	0.00	6.41	6.56	0.12	3.95	2.08	2.98	0.23	1.14	99.14
SI0-45	63.28	0.75	15.95	0.00	4.80	4.02	0.07	2.71	3.07	3.31	0.28	1.23	99.47
SI0-89	63.86	0.88	16.43	0.00	4.90	2.52	0.07	3.94	3.45	2.20	0.24	0.92	99.41
SI0-93	57.62	1.15	16.37	0.00	6.30	4.75	0.12	4.98	3.75	2.84	0.71	0.66	99.25
SI0-95	58.31	1.00	15.67	0.00	7.23	5.55	0.12	3.35	2.79	3.72	0.52	0.92	99.18
SI0-2025	66.70	0.47	16.70	0.00	2.89	1.18	0.06	2.32	4.93	2.92	0.24	1.24	99.65
SI0-2022	68.18	0.47	15.85	0.00	2.69	1.36	0.05	2.22	3.57	4.03	0.22	1.04	99.68

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-19	18.16	.81	14.84	30.19	180					16.03		1.33		.59	63.2	37.3
SI0-26	2.15		18.51	28.67	20.90				2.70	24.72		1.76		.57	49.3	42.1
SI0-44	13.43	2.53	17.96	17.95	18.46					27.62		1.47		.55	49.3	50.6
SI0-45	18.55	3.11	19.90	26.43	11.82					18.04		1.44		.67	64.8	30.9
SI0-89	20.66	1.81	13.19	29.63	18.25					14.16		1.69		.57	63.4	38.1
SI0-93	4.88		17.01	32.17	19.71				.52	21.76		2.21		1.70	54	37.9
SI0-95	8.60	2.24	22.36	24.01	13.45					26.12		1.93		1.25	54.9	35.9
SI0-2025	18.97	1.81	17.52	42.37	10.10					7.71		.90		.57	78.8	19.2
SI0-2022	24.20	2.13	24.13	30.61	9.70					7.76		.90		.52	78.9	24

GEMA

Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-19		147	383	267	77	197	18	53		71	134	9		12	141	.69
SIO-26		192	341	305	113	211	25	70		86	144	12		23	132	.89
SIO-44		156	312	401	126	449	27	103		66	148			15	158	1.28
SIO-45		163	407	566	91	205	14	46		75	173			11	168	1.39
SIO-89		148	350	266	67	143	13	24	17	59	164	5		9	123	.76
SIO-93		192	307	464	132	168	19	40	56	82	233	5		21	122	1.51
SIO-95		277	266	340	95	252	24	118	134	116	194	5		22	111	1.27
SIO-2025		192	282	313	17	61	6	6	1	45	213	6		19	126	1.10
SIO-2022		209	429	455	34	113	5	11		61	145			9	160	1.06

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-6	64.93	0.60	15.94	0.00	3.81	2.50	0.06	3.47	3.91	3.52	0.20	0.64	99.58
SI0-8	66.95	0.54	15.56	0.00	3.38	2.34	0.06	3.00	3.14	3.82	0.20	0.64	99.63
SI0-9	67.48	0.46	15.11	0.00	2.68	1.62	0.05	2.59	4.97	3.74	0.20	0.83	99.73
SI0-10	66.52	0.55	15.79	0.00	3.59	2.17	0.06	3.03	3.29	3.72	0.19	0.70	99.61
SI0-15	66.70	0.54	15.32	0.00	3.20	2.23	0.06	2.66	3.56	4.00	0.22	1.16	99.65
SI0-17	67.52	0.52	15.39	0.00	3.11	1.93	0.05	2.99	3.49	3.81	0.23	0.64	99.68
SI0-18	65.39	0.53	15.54	0.00	3.14	2.53	0.05	2.67	5.08	3.87	0.26	0.65	99.71
SI0-20	67.18	0.54	15.65	0.00	3.28	2.09	0.05	2.93	3.36	3.87	0.23	0.46	99.64
SI0-21	65.79	0.57	15.74	0.00	3.49	2.35	0.06	2.57	3.42	3.98	0.24	1.42	99.63
SI0-42	67.07	0.54	16.01	0.00	3.60	2.23	0.05	2.78	2.40	3.79	0.18	0.91	99.56
SI0-48	66.38	0.49	15.17	0.00	2.80	1.77	0.02	2.79	3.02	3.82	0.22	3.23	99.71
SI0-62	68.05	0.49	15.68	0.00	3.02	1.87	0.06	2.94	2.86	3.78	0.22	0.70	99.67
SI0-66	66.74	0.54	15.66	0.00	3.32	2.27	0.05	2.59	2.83	4.26	0.23	1.14	99.63
SI0-78	67.10	0.52	15.63	0.00	2.96	1.97	0.07	2.51	3.82	3.82	0.18	0.79	99.37
SI0-86	66.95	0.52	15.68	0.00	3.39	1.96	0.06	2.90	3.44	3.74	0.22	0.77	99.63
SI0-87	66.74	0.53	15.64	0.00	3.35	2.03	0.05	2.93	3.73	3.66	0.21	0.75	99.62
SI0-88	66.83	0.52	15.65	0.00	3.23	2.03	0.05	2.93	3.76	3.72	0.21	0.71	99.64
SI0-90	65.71	0.58	15.71	0.00	3.63	2.42	0.05	3.12	3.54	3.78	0.23	0.80	99.57
SI0-92	66.56	0.56	15.85	0.00	3.51	2.24	0.06	3.08	3.30	3.71	0.22	0.50	99.59
SI0-94	67.75	0.49	15.55	0.00	3.12	1.91	0.05	2.88	3.36	3.80	0.19	0.55	99.65
SI0-96	67.52	0.51	15.63	0.00	3.19	1.96	0.05	2.92	3.29	3.86	0.20	0.50	99.63
SI0-97	67.31	0.48	15.83	0.00	3.10	1.90	0.05	2.89	3.56	3.93	0.20	0.40	99.65
SI0-98	68.53	0.47	15.46	0.00	2.96	1.76	0.05	2.79	3.15	3.92	0.20	0.35	99.64
SI0-99	68.52	0.43	15.35	0.00	2.83	1.71	0.05	2.44	3.26	4.20	0.18	0.70	99.67
SI0-100	68.91	0.41	15.39	0.00	2.64	1.55	0.04	2.40	3.64	4.04	0.20	0.50	99.72
SI0-101	68.09	0.45	15.60	0.00	2.96	1.82	0.05	2.08	3.68	3.70	0.22	1.00	99.65
SI0-102	66.87	0.47	15.41	0.00	2.99	2.14	0.06	2.25	3.41	4.22	0.19	1.65	99.66
SI0-103	66.58	0.54	15.83	0.00	3.33	2.13	0.05	2.78	3.52	3.88	0.22	0.76	99.62
SI0-105	67.45	0.48	15.77	0.00	3.02	1.91	0.04	2.19	3.37	4.19	0.24	1.00	99.66
SI0-2031	67.17	0.52	15.44	0.00	3.00	2.06	0.06	2.39	4.54	3.70	0.14	0.78	99.80
SI0-2030	67.94	0.49	15.54	0.00	2.73	1.76	0.05	2.40	4.65	3.39	0.14	0.75	99.84
SI0-2009	68.65	0.46	15.30	0.00	2.86	1.71	0.06	2.05	3.15	4.10	0.20	1.10	99.64
SI0-2016	68.56	0.48	15.32	0.00	2.88	1.67	0.05	2.87	3.29	3.78	0.21	0.52	99.63
SI0-2024	69.70	0.38	14.73	0.00	2.42	1.33	0.05	2.46	3.57	4.11	0.18	0.77	99.70
SI0-2027	68.37	0.44	15.04	0.00	2.72	1.60	0.05	2.86	4.03	3.76	0.20	0.60	99.67
SI0-2015	69.16	0.42	15.00	0.00	2.63	1.51	0.05	2.62	3.42	3.96	0.19	0.70	99.66

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	OI	II	Mag	Ap	ITT	%An
SIO-6	15.57		21.01	33.43	15.71				.30	12.33		1.15		.47	70	31.9
SIO-8	22.47	1.29	22.80	26.83	13.71					11.36		1.03		.47	72.1	33.8
SIO-9	15.88		22.34	42.51	7.96				3.07	6.85		.88		.47	80.7	15.7
SIO-10	21.55	1.31	22.22	28.14	13.94					11.32		1.05		.45	71.9	33.1
SIO-15	20.26	.83	23.99	30.57	11.93					10.81		1.04		.52	74.8	28
SIO-17	21.95	.64	22.72	29.81	13.45					9.85		.99		.54	74.4	31.1
SIO-18	10.82		23.07	43.38	8.24				2.79	10.03		1.01		.62	77.2	15.9
SIO-20	21.87	1.16	23.05	28.65	13.13					10.52		1.03		.54	73.5	31.4
SIO-21	20.15	1.73	23.94	29.46	11.38					11.63		1.10		.57	73.5	27.8
SIO-42	27.54	3.38	22.69	20.58	12.78					11.53		1.03		.43	70.8	38.3
SIO-48	25.09	1.57	23.39	26.48	12.85					9.09		.96		.53	74.9	32.6
SIO-62	26.54	2.08	22.56	24.44	13.28					9.60		.94		.52	73.5	35.2
SIO-66	23.63	2.26	25.55	24.30	11.51					11.11		1.04		.55	73.4	32.1
SIO-78	20.60	1.09	22.89	32.78	11.43					9.75		10		.43	76.2	25.8
SIO-86	21.86	1.24	22.35	29.43	13.09					10.47		.99		.52	73.6	30.7
SIO-87	20.10	.72	21.87	31.91	13.31					10.54		1.01		.50	73.8	29.4
SIO-88	19.87	.61	22.21	32.15	13.30					10.33		.99		.50	74.2	29.2
SIO-90	18.59	.68	22.61	30.32	14.14					11.97		1.11		.55	71.5	31.8
SIO-92	21.47	1.34	22.12	28.17	13.96					11.31		1.07		.52	71.7	33.1
SIO-94	23.10	1.13	22.65	28.68	13.16					9.85		.93		.45	74.4	31.4
SIO-96	22.86	1.21	23.0	28.07	13.29					10.08		.97		.47	73.9	32.1
SIO-97	20.98	.95	23.39	30.34	13.12					9.80		.91		.47	74.7	30.1
SIO-98	25.17	1.45	23.32	26.83	12.62					9.21		.89		.47	75.3	31.9
SIO-99	24.37	1.45	25.07	27.86	11.04					8.93		.82		.43	77.3	28.3
SIO-100	23.63	1.15	24.05	31.03	10.68					8.17		.78		.47	78.7	25.6
SIO-101	24.12	2.31	22.16	31.55	90					9.44		.86		.52	77.8	22.1
SIO-102	21.63	1.62	25.43	29.43	10.12					10.37		.91		.45	76.5	25.5
SIO-103	20.55	1.32	23.18	30.12	12.49					10.75		1.03		.52	73.8	29.3
SIO-105	23.05	2.31	25.09	28.89	9.42					9.71		.92		.57	77	24.5
SIO-2031	16.82		22.07	38.78	10.92				.09	9.95		.99		.33	77.6	21.9
SIO-2030	18.75	.19	20.21	39.70	11.09					8.76		.93		.33	78.6	21.8
SIO-2009	26.54	2.46	24.58	27.04	8.99					8.99		.88		.48	78.1	24.9
SIO-2016	25.03	1.11	22.53	28.08	12.97					8.84		.91		.50	75.6	31.6
SIO-2024	24.93	.37	24.54	30.52	11.14					7.31		.72		.43	80	26.7
SIO-2027	21.01		22.42	34.41	11.95				.87	80		.84		.47	77.8	25.7
SIO-2015	25.11	.78	23.64	29.23	11.87					8.08		.80		.45	77.9	28.8

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-6		136	355	412	59	186	12	25		51	146	7		13	214	1.16
SIO-8		153	348	422	49	178	11	23		48	141	5		13	207	1.21
SIO-9		164	430	461	37	150	7	13		43	118	7		10	189	1.07
SIO-10		158	301	368	51	202	12	24		52	130	5		15	195	1.22
SIO-15		165	387	519	47	177	10	22		52	115	10		13	201	1.34
SIO-17		158	424	455	48	178	10	22		45	119	9		10	200	1.07
SIO-18		167	378	494	45	139	58	21		58	122	8		14	192	1.30
SIO-20		162	364	450	46	177	9	25		52	129	6		12	198	1.23
SIO-21		167	349	497	52	169	9	26		48	127			11	197	1.42
SIO-42		149	304	462	51	189	11	27		42	149	10		10	211	1.51
SIO-48		19	151	38	200	211	43	95		55	82			13	1,669	.25
SIO-62		148	423	421	46	155	8	18		48	134	10		8	212	.99
SIO-66		172	370	508	47	155	10	25		59	144	10		11	205	1.37
SIO-78		180	350	671	50	130	5	20	3	50	70	5		11	176	1.91
SIO-86		196	342	477	42	149	11	20	4	52	128	5		20	158	1.39
SIO-87		168	345	442	46	151	8	23	4	53	128	5		12	180	1.28
SIO-88		177	340	405	41	140	9	23	2	54	119	5		13	174	1.19
SIO-90		166	368	486	66	196	10	33	8	51	126	5		12	189	1.32
SIO-92		169	371	357	52	162	10	27	3	49	120	5		11	182	.96
SIO-94		178	332	367	50	163	9	25	4	41	126	5		14	177	1.10
SIO-96		177	339	430	41	139	10	20	2	55	122	5		11	181	1.26
SIO-97		180	346	455	42	142	8	23	2	55	124			12	181	1.31
SIO-98		180	326	474	41	144	8	22	2	48	116			15	180	1.45
SIO-99		172	301	455	35	136	8	18	3	52	110	5		12	202	1.51
SIO-100		172	292	446	32	140	7	15	1	44	108			11	194	1.52
SIO-101		147	289	448	37	173	8	17	1	55	115	5		11	208	1.55
SIO-102		170	326	517	38	141	9	18	13	62	115	5		11	206	1.58
SIO-103		179	350	499	46	156	9	22	3	54	128			10	179	1.42
SIO-105		207	315	472	41	129	9	19	3	30	114			8	168	1.49
SIO-2031		192	347	479	46	173	10	24	10	58	117	10		18	159	1.38
SIO-2030		185	351	499	37	177	8	19	18	50	122	10		16	152	1.42
SIO-2009		178	370	560	35	157	7	17		50	118			11	191	1.51
SIO-2016		172	407	538	38	148	7	17		52	119			8	182	1.32
SIO-2024		180	363	480	26	128	6	17	1	43	112	7		13	189	1.32
SIO-2027		158	411	512	33	133	7	21		43	113	5		12	197	1.24
SIO-2015		184	370	504	39	162	6	18		39	109			10	178	1.36

GEMA

Listado de elementos mayores

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SIO-1	72.79	0.24	13.95	0.00	1.76	0.45	0.04	0.98	3.50	5.05	0.10	0.92	99.78
SIO-2	72.99	0.29	13.69	0.00	2.12	0.42	0.04	1.13	3.53	4.99	0.11	0.44	99.75
SIO-3	73.22	0.28	13.60	0.00	2.06	0.40	0.04	1.17	3.56	4.84	0.11	0.49	99.77
SIO-67	75.70	0.14	13.11	0.00	1.34	0.24	0.05	0.45	3.81	4.12	0.01	0.80	99.77
SIO-68	73.96	0.27	13.26	0.00	1.77	0.45	0.04	1.07	3.71	4.24	0.01	0.84	99.62
SIO-69	73.91	0.30	13.39	0.00	1.88	0.52	0.05	1.05	3.80	4.19	0.09	0.58	99.76
SIO-70	73.05	0.23	14.10	0.00	1.72	0.48	0.04	0.55	3.45	4.38	0.25	1.79	100.04
SIO-71	73.49	0.21	14.39	0.00	1.56	0.34	0.05	0.60	3.92	4.51	0.23	0.90	100.20
SIO-72	72.74	0.28	14.46	0.00	1.87	0.45	0.05	0.71	3.79	4.65	0.25	0.94	100.19
SIO-73	72.59	0.25	14.57	0.00	1.68	0.36	0.04	0.60	3.60	5.16	0.25	1.11	100.21
SIO-74	73.26	0.19	14.38	0.00	1.55	0.32	0.04	0.54	3.90	4.44	0.25	1.22	100.09
SIO-75	72.35	0.31	14.41	0.00	1.99	0.53	0.05	1.07	3.96	4.27	0.18	0.84	99.96
SIO-76	72.24	0.34	13.91	0.00	2.20	0.48	0.06	1.17	3.94	4.52	0.12	0.68	99.66
SIO-77	74.26	0.24	13.39	0.00	1.58	0.41	0.05	0.80	3.88	4.18	0.11	0.56	99.46
SIO-115	71.78	0.30	14.70	0.00	2.00	0.55	0.03	0.88	3.56	4.82	0.27	0.88	99.77
SIO-2028	73.96	0.22	13.52	0.00	1.73	0.43	0.04	0.70	3.20	5.22	0.09	0.70	99.81

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SIO-1	29.62	1.19	30.18	29.95	4.25					4.08		.46		.23	89.7	12.4
SIO-2	29.23	.69	29.68	30.07	4.92					4.57		.55		.26	88.9	14
SIO-3	29.86	.64	28.80	30.33	5.12					4.42		.53		.26	89	14.4
SIO-67	35.79	1.60	24.59	32.57	2.18					2.95		.26		.02	92.9	6.2
SIO-68	32.30	.65	25.36	31.77	5.30					4.05		.51		.02	89.4	14.3
SIO-69	31.86	.91	24.96	32.41	4.65					4.39		.57		.21	89.2	12.5
SIO-70	34.32	3.33	26.33	29.70	1.11					4.13		.44		.60	90.3	3.6
SIO-71	31.30	2.53	26.83	33.39	1.48					3.49		.40		.54	91.5	4.2
SIO-72	30.24	2.51	27.68	32.30	1.90					4.21		.53		.59	90.2	5.5
SIO-73	29.79	2.59	30.76	30.73	1.35					3.68		.47		.59	91.2	4.2
SIO-74	31.81	2.80	26.53	33.36	1.05					3.45		.36		.59	91.7	3
SIO-75	29.17	1.77	25.45	33.79	4.16					4.60		.59		.42	88.4	10.9
SIO-76	27.78	.70	26.98	33.67	5.07					4.84		.65		.28	88.4	13
SIO-77	32.85	1.30	24.97	33.19	3.28					3.65		.46		.26	91	9
SIO-115	29.52	2.70	28.79	30.45	2.63					4.66		.57		.64	88.7	7.9
SIO-2028	32.45	1.56	31.11	27.31	2.91					40		.42		.21	90.8	9.6

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GEMA

Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-1		316	91	248	5	117	3	1	4	51	127			13	132	2.72
SIO-2		299	80	40	4	135	3	1	2	48	156			24	138	.5
SIO-3		299	81	201	4	121	4	4	3	52	164	5		26	134	2.48
SIO-67		390	30	72	3	151		1	5	67	50	9		6	87	2.4
SIO-68		260	100	381	7	148		4	4	74	100	6		12	135	3.81
SIO-69		270	110	320	10	149		5	2	58	90	8		11	128	2.90
SIO-70		330	44	228		119		84	29	103	40			7	110	5.18
SIO-71		340	43	149	2	127		104	4	58	30			7	110	3.46
SIO-72		290	75	201	7	145		88	2	66	70			9	133	2.68
SIO-73		313	46	202	1	119		97	2	35	60			8	136	4.39
SIO-74		343	36	109	3	143		78	16	64	20			7	107	3.02
SIO-75		250	98	356	5	159		90	1	51	110			11	141	3.63
SIO-76		300	120	178	10	115		5	3	45	130	5		11	125	1.48
SIO-77		280	70	364	10	135		5	3	35	60	5		3	123	5.2
SIO-115		294	73	316	9	119	11	3	12	67	131			11	136	4.32
SIO-2028		316	60	184	3	146	3	4		407	116			15	137	3.06

GEMA**Listado de elementos mayores**

Ref.	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	MnO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	H ₂ O	Total
SI0-84	71.42	0.29	14.34	0.00	1.91	0.99	0.03	1.92	3.48	4.62	0.13	0.65	99.78
SI0-85	74.52	0.19	13.52	0.00	1.47	0.59	0.03	1.24	3.06	4.69	0.07	0.45	99.83

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-84	27.10	.43	27.53	29.70	8.75					5.59		.55		.31	84.3	22.7
SI0-85	34.53	1.33	27.88	26.05	5.72					3.93		.36		.16	88.4	18

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-84		200	230	299	22	136	5	11	9	22	90	5		12	191	1.3
SI0-85		229	124	200	11	145	3	9	4	21	75	5		12	170	1.61

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-27	69.23	0.39	15.13	0.00	2.35	1.58	0.05	1.92	3.73	4.32	0.18	0.86	99.75
SI0-29	69.28	0.38	15.04	0.00	2.21	1.16	0.04	1.62	3.96	4.83	0.26	1.00	99.78
SI0-30	69.17	0.42	15.67	0.00	2.67	1.50	0.04	2.50	3.11	3.44	0.15	1.03	99.70
SI0-33	69.15	0.41	15.17	0.00	2.55	1.71	0.05	2.03	3.26	4.18	0.22	1.00	99.73
SI0-37	68.39	0.46	15.91	0.00	2.60	1.29	0.05	2.99	3.41	3.60	0.19	0.83	99.72
SI0-40	71.63	0.31	15.15	0.00	1.93	0.85	0.03	2.11	2.53	4.05	0.16	1.01	99.76
SI0-50	69.93	0.42	14.21	0.00	2.48	1.42	0.05	1.36	3.60	4.96	0.19	1.10	99.72
SI0-55	70.35	0.35	15.24	0.00	2.15	1.02	0.04	2.10	3.52	3.83	0.00	0.15	98.75
SI0-64	70.27	0.44	14.92	0.00	2.40	1.24	0.05	1.95	3.07	4.10	0.18	1.10	99.72
SI0-106	69.53	0.38	15.40	0.00	2.53	0.97	0.04	2.01	3.71	4.07	0.15	0.90	99.69
SI0-107	70.42	0.34	15.05	0.00	2.26	0.89	0.04	1.48	3.37	4.74	0.14	1.00	99.73
SI0-114	69.87	0.39	15.22	0.00	2.48	0.91	0.04	2.25	3.80	3.69	0.15	0.90	99.70
SI0-116	71.16	0.31	14.88	0.00	2.14	0.64	0.04	1.19	3.43	4.54	0.29	1.20	99.82
SI0-120	70.71	0.35	14.92	0.00	2.23	0.80	0.03	1.49	3.42	4.63	0.17	1.00	99.75
SI0-2005	69.50	0.40	15.02	0.00	2.39	0.96	0.04	1.59	4.31	4.31	0.17	1.03	99.72
SI0-2036	72.20	0.31	14.80	0.00	2.50	0.34	0.40	0.71	2.46	4.93	0.12	0.67	99.44
SI0-2001	69.42	0.38	15.18	0.00	2.23	1.02	0.04	1.55	4.31	4.49	0.16	0.96	99.74
SI0-2004	69.45	0.37	14.90	0.00	2.28	1.16	0.04	1.90	4.43	4.04	0.17	1.00	99.74
SI0-2020	70.84	0.35	14.79	0.00	2.21	1.19	0.04	2.08	3.53	4.03	0.17	0.47	99.70
SI0-2035	69.78	0.43	14.92	0.00	2.38	0.84	0.04	1.66	4.27	4.07	0.17	1.17	99.74
SI0-2002	68.63	0.41	15.19	0.00	2.54	1.31	0.04	1.76	4.58	3.71	0.19	1.34	99.70
SI0-2006	70.01	0.33	14.91	0.00	2.22	0.97	0.05	1.51	4.43	4.10	0.15	1.07	99.75

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SIO-27	23.59	1.28	25.81	31.91	8.41					7.79		.74		.44	81.3	20.8
SIO-29	21.96	.98	28.88	33.91	6.41					6.47		.73		.62	84.7	15.9
SIO-30	29.18	2.67	20.59	26.66	11.57					8.13		.80		.35	76.4	30.2
SIO-33	26.37	2.14	25.01	27.93	8.74					8.47		.78		.52	79.3	23.8
SIO-37	25.39	1.43	21.50	29.17	13.74					7.40		.88		.45	76	32
SIO-40	35.10	3.19	24.23	21.67	9.54					5.27		.59		.38	81	30.5
SIO-50	24.04	.91	29.71	30.88	5.58					7.59		.80		.45	84.6	15.3
SIO-55	28.01	1.50	22.95	30.20	10.56					6.08		.67			81.1	25.9
SIO-64	29.89	2.34	24.56	26.33	8.61					6.96		.84		.43	80.7	24.6
SIO-106	25.48	1.61	24.34	31.77	9.10					6.60		.73		.35	81.5	22.2
SIO-107	27.24	2.04	28.36	28.87	6.50					5.96		.65		.33	84.4	18.3
SIO-114	26.38	1.25	22.06	32.53	10.30					6.33		.74		.35	80.9	24
SIO-116	29.96	2.89	27.19	29.42	4.06					5.15		.59		.69	86.5	12.1
SIO-120	27.91	.20	27.70	29.30	6.36					5.63		.67		.40	84.9	17.8
SIO-2005	22.13	.79	25.80	36.94	6.86					6.28		.76		.40	84.8	15.6
SIO-2036	35.57	4.46	29.49	21.07	2.77					5.74		.59		.28	86.1	11.6
SIO-2001	21.42	.80	26.85	36.91	6.72					6.15		.73		.38	85.1	15.4
SIO-2004	21.50	.19	24.17	37.95	8.42					6.63		.71		.40	83.6	18.1
SIO-2020	27.72	1.25	23.99	30.09	9.27					6.57		.66		.40	81.8	23.5
SIO-2035	23.66	.88	24.39	36.64	7.23					5.93		.82		.40	84.7	16.4
SIO-2002	21.09	.90	22.28	39.39	7.61					7.45		.79		.45	82.7	16.1
SIO-2006	22.94	.80	24.54	37.97	6.59					6.12		.63		.35	85.4	14.8

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-27		207	453	523	30	157	7	25		43	107	5		9	173	1.15
SI0-29		265	312	438	26	145	6	14		45	124	3		8	151	1.40
SI0-30		183	351	499	37	167	7	16		67	135	2		8	156	1.42
SI0-33		212	477	583	31	163	8	29		49	122	5		9	163	1.22
SI0-37		169	471	571	37	130	7	6		40	130	3		9	176	1.21
SI0-40		184	248	431	11	109	4	4		34	129			8	182	1.73
SI0-50		229	250	471	39	155	6	122		40	129			11	179	1.88
SI0-55		182	295	369	24	132	4	5		41	122	10		7	174	1.25
SI0-64		176	278	583	36	133	6	6		35	128	10		6	193	2.09
SI0-106		184	221	684	13	106	5	4	2	58	190			11	183	3.09
SI0-107		217	200	497	13	106	4	4	2	58	170			10	181	2.48
SI0-114		179	203	625	16	107	4	14	4	57	184	5		11	171	3.07
SI0-116		270	129	456	12	124	3	16	4	55	140			8	139	3.53
SI0-120		223	169	501	13	110	4	5	4	50	162			10	172	2.96
SI0-2005		223	276	571	18	117	5	5	2	48	168	5		7	160	2.06
SI0-2036	70	310	101	558	12	11	6	2	14	48	293	17		15	132	5.52
SI0-2001		219	298	503	23	117	5	8	3	36	157	5		8	170	1.68
SI0-2004		181	328	551	21	149	5	8	2	41	123	5		9	185	1.67
SI0-2020		195	330	444	29	157	4	18		31	94			7	171	1.34
SI0-2035		230	179	598	24	108	6	2	4	56	176	8		9	146	3.34
SI0-2002		163	365	544	27	126	5	7	1	53	132	5		8	188	1.49
SI0-2006		203	240	471	18	119	5	8	21	121	118	5		7	167	1.96

GEMA

Listado de elementos mayores

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-7	66.47	0.66	15.93	0.00	3.43	1.72	0.05	3.18	3.79	3.55	0.24	0.60	99.62
SI0-36	67.32	0.54	16.03	0.00	2.86	1.63	0.05	2.78	3.44	3.53	0.18	1.34	99.70
SI0-59	66.61	0.61	16.36	0.00	3.07	1.78	0.05	2.78	3.02	3.90	0.28	1.17	99.63
SI0-104	63.67	0.71	16.55	0.00	4.11	3.14	0.07	3.24	3.47	3.38	0.23	1.00	99.57
SI0-2029	66.97	0.60	15.73	0.00	3.14	1.88	0.05	2.89	4.76	2.89	0.14	0.75	99.80
SI0-2008	67.75	0.50	15.94	0.00	2.90	1.36	0.05	3.13	4.21	2.71	0.17	0.93	99.65
SI0-2033	66.74	0.71	15.65	0.00	3.29	1.71	0.06	2.87	4.47	3.26	0.15	0.87	99.78
SI0-2007	66.12	0.57	16.69	0.00	2.97	1.34	0.05	3.26	4.49	2.58	0.21	1.40	99.68

GEMA

Listado de la norma CIPW

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-7	19.91	.65	21.18	32.38	14.34					9.67		1.26		.57	73.4	30.7
SI0-36	24.30	1.97	21.20	29.58	12.79					8.65		1.04		.44	75	30.1
SI0-59	24.51	2.82	23.40	25.94	12.14					9.31		1.17		.67	73.8	31.8
SI0-104	16.85	1.86	20.25	29.78	14.78					14.53		1.36		.55	66.8	33.1
SI0-2029	17.65		17.23	40.65	13.14				.33	9.49		1.15		.33	75.5	24.4
SI0-2008	22.83	.80	16.21	36.07	14.60					8.09		.96		.40	75.1	28.8
SI0-2033	17.96		19.47	38.23	13.15				.20	9.24		1.36		.35	75.6	25.5
SI0-2007	19.97	1.10	15.50	38.64	15.05					8.09		1.10		.50	74.1	28

GEMA

Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-7		131	420	542	41	112	9	12		50	227	8		14	224	1.29
SI0-36		173	434	467	40	141	8	9		47	129	6		11	169	1.07
SI0-59		175	561	714	59	119	7	12		31	217	10		9	185	1.27
SI0-104		165	403	671	66	196	13	42	6	65	160			8	170	1.66
SI0-2029		165	421	472	47	179	9	12	2	53	154	10		12	145	1.12
SI0-2008		134	551	763	35	118	6	14		47	165			1	167	1.38
SI0-2033		137	461	746	45	121	8	8	9	60	217	20		17	197	1.61
SI0-2007		137	425	640	35	93	5	14	3	52	153	5		8	156	1.50

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SIO-28	75.45	0.14	13.07	0.00	0.88	0.37	0.01	1.02	3.01	5.07	0.06	0.83	99.91
SIO-31	75.35	0.15	13.41	0.00	0.91	0.37	0.02	0.73	2.94	5.24	0.06	0.72	99.91
SIO-35	75.88	0.10	13.35	0.00	0.77	0.20	0.01	0.37	2.64	5.35	0.08	1.15	99.90
SIO-38	74.93	0.09	14.43	0.00	0.86	0.19	0.03	0.60	2.70	4.77	0.12	1.17	99.89
SIO-49	76.05	0.12	13.04	0.00	0.86	0.30	0.02	0.93	2.71	5.18	0.04	0.64	99.89
SIO-108	74.22	0.07	14.44	0.00	1.07	0.06	0.02	0.39	3.96	4.31	0.32	1.00	99.86
SIO-109	74.36	0.07	14.27	0.00	0.92	0.11	0.02	0.53	3.73	4.24	0.45	1.17	99.87
SIO-117	74.65	0.10	14.22	0.00	1.15	0.10	0.03	0.40	3.62	4.00	0.41	1.17	99.85
SIO-118	75.15	0.07	14.04	0.00	0.93	0.09	0.01	0.37	3.45	4.36	0.29	1.10	99.86
SIO-119	74.46	0.10	14.36	0.00	1.04	0.14	0.03	0.48	3.45	4.26	0.39	1.16	99.87
SIO-121	74.70	0.10	14.50	0.00	1.07	0.13	0.02	0.48	3.40	4.27	0.38	1.12	100.17
SIO-2003	76.23	0.08	13.14	0.00	0.74	0.13	0.00	0.18	3.44	4.79	0.08	1.11	99.92

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SIO-28	35.65	.92	30.23	25.70	4.71					2.34		.26		.14	91.5	15.4
SIO-31	35.88	1.74	31.21	25.07	3.22					2.41		.28		.15	92.1	11.3
SIO-35	39.09	2.77	32.01	22.61	1.32					1.79		.19		.19	93.7	5.5
SIO-38	39.56	4.07	28.55	23.13	2.22					1.98		.17		.28	91.2	8.7
SIO-49	37.77	1.39	30.83	23.10	4.38					2.18		.22		.09	91.7	15.9
SIO-108	34.18	3.35	25.75	33.88	-.15					2.07		.13		.76	93.8	-.4
SIO-109	36.12	3.70	25.37	31.96	-.31					1.92		.13		1.07	93.4	-.9
SIO-117	38.01	4.24	23.94	31.03	-.70					2.28		.19		.98	92.9	-2.3
SIO-118	38.01	3.71	26.08	29.55	-.05					1.86		.13		.69	93.6	-.1
SIO-119	37.60	4.18	25.49	29.56	-.16					2.18		.19		.93	92.6	-.5
SIO-121	37.93	4.36	25.46	29.03	-.09					2.19		.19		.90	92.4	-.3
SIO-2003	37.41	2.18	28.64	29.45	.37					1.58		.15		.19	95.5	1.2

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-28		183	121	135	7	104	3	6		8	50	2		8	229	1.11
SIO-31		208	66	89	7	125	3	7		12	49	1		5	209	1.34
SIO-35		236	35	36	2	134	5	5		11	38			7	188	1.02
SIO-38		256	60	187	2	117	2	7		19	23			6	154	3.11
SIO-49		184	88	84	7	123	1	3		13	53			6	233	.95
SIO-108		503	10	5		103	7	2	2	63	39			10	71	.5
SIO-109		530	19	11		90	1	3	5	16	28			3	66	.57
SIO-117		586	9	18	2	146	31	15	31	49	39			3	56	2
SIO-118		369	14	9	3	137	1	14	5	16	20			2	98	.64
SIO-119		593	12	24	3	134		10	11	38					59	2
SIO-121		568	17	20	1	103		6	4	26	36			3	62	1.17
SIO-2003		240	54	94		137	5	3	18	8	31	5		3	165	1.74

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SIO-79	67.21	0.52	14.94	0.00	3.48	1.90	0.05	2.40	3.59	4.21	0.21	1.10	99.61
SIO-80	66.58	0.64	14.87	0.00	3.91	2.36	0.05	2.11	3.26	4.52	0.24	1.00	99.54

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SIO-79	20.57	.62	25.25	30.83	10.69					10.51		10		.50	76.6	25.7
SIO-80	20.42	1.37	27.10	27.98	9.03					12.27		1.23		.57	75.5	24.3

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-79		185	281	384	45	138	9	21	4	227	130	5		13	188	1.36
SIO-80		218	246	457	39	120	14	18	4	76	159	5		20	172	1.85

GEMA
Listado de elementos mayores

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-14	69.74	0.31	14.69	0.00	2.04	1.71	0.03	0.95	3.72	4.65	0.29	1.70	99.83
SI0-16	70.07	0.40	13.89	0.00	2.57	1.08	0.05	0.85	2.93	5.61	0.18	2.10	99.73
SI0-81	71.91	0.29	14.17	0.00	2.15	0.56	0.06	0.59	2.75	5.10	0.16	2.00	99.74
SI0-110	72.53	0.26	14.09	0.00	1.83	0.54	0.04	0.63	3.13	5.15	0.26	1.34	99.80

GEMA
Listado de la norma CIPW

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-14	25.51	2.55	27.99	32.06	2.87					7.69		.59		.69	85.5	8.2
SI0-16	27.38	1.92	33.95	25.38	3.11					7.01		.77		.43	86.7	10.9
SI0-81	33.88	3.51	30.83	23.80	1.92					5.08		.56		.38	88.5	7.4
SI0-110	32.31	2.88	30.90	26.89	1.45					4.42		.50		.62	90.1	5.1

GEMA
Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-14	201	394	548	17	157	5	21		40	98				7	192	1.39
SI0-16	254	93	427	11	142	5	7		48	164				17	183	4.59
SI0-81	354	80	282	8	112	4	6	3	42	159	5			15	119	3.52
SI0-110	310	72	177	5	82	2	1	6	33	126				11	137	2.45

GEMA

Listado de elementos mayores

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-4	49.38	1.65	15.07	0.00	8.06	7.92	0.13	6.18	3.14	3.82	0.20	3.90	99.45
SI0-22	56.60	0.91	14.97	0.00	5.34	5.19	0.12	2.99	2.80	5.28	0.84	4.46	99.51
SI0-24	56.93	1.11	16.29	0.00	5.99	4.73	0.10	5.30	3.48	3.22	0.48	1.77	99.40
SI0-122	58.72	1.30	15.69	0.00	6.20	3.90	0.10	3.97	2.68	3.72	0.37	2.60	99.25

GEMA

Listado de la norma CIPW

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-4			23.62	19.99	16.47	4.22			11.60		20.30	3.27		.49	47.8	45.1
SI0-22	4.70	1.30	32.80	24.91	9.77					22.56		1.81		2.11	62.4	28.1
SI0-24	3.98		19.48	30.14	19.77				3.19	20.07		2.15		1.17	53.6	39.6
SI0-122	11.71	.95	22.73	23.45	17.87					19.79		2.55		.90	57.9	43.2

GEMA

Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-4		178	252	2,000	129	267	37	175		81	138	23		17	178	7.93
SI0-22		281	347	1,400	132	132	16	8		72	304	17		17	155	4.03
SI0-24		99	784	660	125	161	20	16		65	213	17		10	270	.84
SI0-122		124	261	618	73	176	19	33	14	475	298	12		22	249	2.36

GEMA

Listado de elementos mayores

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SI0-5	67.53	0.43	14.90	0.00	2.52	1.63	0.04	2.01	3.65	4.27	0.20	2.54	99.72
SI0-23	65.98	0.56	15.87	0.00	3.47	2.32	0.05	2.67	3.60	4.05	0.22	0.83	99.63
SI0-25	65.15	0.63	16.04	0.00	3.45	2.36	0.08	2.94	3.55	3.78	0.35	1.30	99.63
SI0-47	68.26	0.50	15.59	0.00	2.87	1.79	0.02	2.85	2.83	3.88	0.22	0.84	99.65
SI0-83	67.03	0.48	15.38	0.00	3.05	2.00	0.04	2.31	2.50	4.14	0.22	1.48	98.63
SI0-111	66.67	0.52	15.64	0.00	2.99	2.11	0.06	2.76	3.90	3.84	0.26	0.92	99.67
SI0-112	67.09	0.50	15.50	0.00	3.02	2.17	0.06	2.73	3.30	4.01	0.26	1.00	99.64
SI0-113	67.24	0.49	15.39	0.00	2.91	1.87	0.05	2.64	3.76	3.86	0.23	1.23	99.67

GEMA

Listado de la norma CIPW

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-5	22.60	1.12	25.96	31.77	8.91					8.28		.84		.48	80.3	21.9
SI0-23	18.70	1.27	24.21	30.82	11.89					11.46		1.07		.54	73.7	27.8
SI0-25	19.03	1.62	22.70	30.53	12.49					11.52		1.21		.84	72.2	29
SI0-47	27.06	2.10	23.19	24.22	12.85					9.06		.96		.52	74.4	34.6
SI0-83	27.90	3.20	25.17	21.77	10.31					10.15		.93		.53	74.8	32.1
SI0-111	19.03	.68	22.97	33.40	12.14					10.13		.99		.62	75.4	26.6
SI0-112	22.29	1.40	24.01	28.30	12.0					10.38		.96		.62	74.6	29.7
SI0-113	21.01	.78	23.16	32.31	11.77					9.44		.94		.55	76.4	26.7

GEMA

Listado de elementos traza

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-5		178	252	375	34	143	6	15		44	138			10	199	1.48
SI0-23		178	333	478	52	148	10	27		50	123	11		13	188	1.43
SI0-25		168	558	811	45	113	11	27		66	224	8		8	186	1.45
SI0-47		160	402	597	45	120	7	19		18	146			10	201	1.48
SI0-83		181	371	554	39	144	7	21	4	33	133	5		10	189	1.49
SI0-111		168	417	785	35	141	9	26	12	40	175	10		10	189	1.88
SI0-112		170	430	616	43	161	8	31	6	45	143			11	195	1.43
SI0-113		168	383	436	39	131	25	9	6	39	134			13	190	1.13

GEMA**Listado de elementos mayores**

Ref.	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	MnO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	H ₂ O	Total
SI0-13	71.64	0.32	13.35	0.00	2.27	0.92	0.05	0.74	2.84	5.14	0.12	2.36	99.75
SI0-41	75.71	0.06	14.30	0.00	1.00	0.14	0.06	0.17	0.36	5.73	0.12	2.24	99.89
SI0-82	73.88	0.08	14.19	0.00	1.32	0.27	0.04	0.33	2.76	4.66	0.15	2.15	99.83
SI0-91	75.22	0.02	14.32	0.00	0.89	0.01	0.12	0.25	4.12	4.04	0.03	0.87	99.89
SI0-2032	74.21	0.08	13.95	0.00	0.90	0.25	0.04	0.31	4.74	4.15	0.10	1.25	99.98

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SI0-13	31.96	2.11	31.18	24.67	2.96					6.18		.62		.29	87.8	10.7
SI0-41	51.82	7.66	34.67	3.11	.06					2.25		.11		.29	89.6	1.9
SI0-82	39.13	4.46	28.18	23.90	.67					3.11		.15		.36	91.2	2.7
SI0-91	34.84	2.81	24.10	35.20	1.05					1.86		.03		.07	94.1	2.9
SI0-2032	29.64	1.35	24.83	40.61	.89					2.26		.15		.23	95	2.1

GEMA**Listado de elementos traza**

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SI0-13		274	81	339	5	146	5	6		35	162			22	155	4.18
SI0-41		514	11	102	3	83		3		18	2	15		8	92	9.27
SI0-82		532	47	81	2	100	2	4	2	21	43	5		7	72	1.72
SI0-91		771	9	11		95		4	2	46	30	18		13	43	1.22
SI0-2032		444	52	62	1	146	2	5	49	21	13	30		10	77	1.19

GEMA**Listado de elementos mayores**

Ref.	SiO2	TiO2	Al2O3	Fe2O3	FeO	MgO	MnO	CaO	Na2O	K2O	P2O5	H2O	Total
SIO-11	71.19	0.32	14.81	0.00	2.11	1.11	0.04	1.85	2.93	4.33	0.17	0.90	99.76
SIO-12	69.32	0.39	15.07	0.00	2.33	1.27	0.04	2.10	3.60	4.40	0.22	1.00	99.74
SIO-32	71.08	0.34	14.85	0.00	2.19	1.15	0.03	1.87	3.03	4.38	0.17	0.65	99.75
SIO-34	70.60	0.34	15.07	0.00	2.15	1.12	0.04	2.10	3.13	4.24	0.17	0.80	99.77
SIO-39	71.14	0.04	14.93	0.00	2.08	1.15	0.04	2.21	2.91	4.17	0.14	0.67	99.48
SIO-51	71.08	0.31	14.97	0.00	2.00	1.10	0.04	1.68	2.86	4.51	0.17	1.03	99.75
SIO-52	70.54	0.44	15.51	0.00	2.42	1.31	0.04	1.45	3.02	4.10	0.17	1.70	100.70
SIO-53	70.69	0.35	15.19	0.00	2.07	1.08	0.04	1.54	3.03	4.59	0.16	1.02	99.76
SIO-54	70.80	0.28	14.58	0.00	1.89	0.91	0.04	1.47	4.42	4.38	0.15	0.86	99.78
SIO-57	71.15	0.37	14.73	0.00	2.36	1.31	0.05	2.02	2.77	4.12	0.17	0.67	99.72
SIO-60	71.14	0.33	15.02	0.00	2.09	1.09	0.04	1.78	2.84	4.27	0.16	1.00	99.76
SIO-61	69.88	0.41	15.02	0.00	2.45	1.51	0.05	1.82	3.06	4.43	0.20	0.91	99.74
SIO-2012	68.35	0.47	15.70	0.00	2.81	1.40	0.05	2.31	4.02	3.38	0.18	0.97	99.64
SIO-2013	70.25	0.36	14.95	0.00	2.13	1.17	0.04	2.33	3.64	4.05	0.17	0.65	99.74
SIO-2010	69.69	0.38	14.90	0.00	2.44	1.45	0.05	1.91	3.25	4.49	0.17	0.95	99.68
SIO-2011	70.26	0.38	14.86	0.00	2.43	1.27	0.05	2.14	3.34	3.96	0.19	0.82	99.70
SIO-2018	70.13	0.35	14.75	0.00	2.26	1.25	0.05	1.85	3.30	4.40	0.16	1.21	99.71
SIO-2014	69.79	0.41	14.64	0.00	2.60	1.45	0.05	2.52	3.37	3.99	0.18	0.66	99.66
SIO-2019	70.09	0.36	14.81	0.00	2.33	1.36	0.05	2.10	3.64	3.97	0.17	0.82	99.70
SIO-2034	70.44	0.32	14.87	0.00	2.09	0.92	0.04	1.87	4.07	3.96	0.17	1.00	99.75
SIO-2026	69.58	0.38	14.90	0.00	2.39	1.30	0.05	2.40	3.70	3.96	0.17	0.88	99.71
SIO-2017	70.53	0.38	14.70	0.00	2.39	1.28	0.05	2.03	3.06	4.36	0.17	0.74	99.69
SIO-2021	69.02	0.40	14.81	0.00	3.21	1.36	0.05	2.29	3.54	4.05	0.18	0.72	99.63
SIO-2023	69.92	0.35	14.93	0.00	2.63	1.14	0.04	2.18	3.71	4.01	0.17	0.62	99.70

GEMA**Listado de la norma CIPW**

Ref.	Q	Cor	Ort	Ab	An	Ne	Le	Ac	Di	Hy	Ol	Il	Mag	Ap	ITT	%An
SIO-11	31.23	2.37	25.87	25.07	8.16					6.25		.61		.40	82.1	24.5
SIO-12	24.38	1.10	26.32	30.84	9.09					6.95		.75		.52	81.5	22.7
SIO-32	30.13	2.16	26.11	25.86	8.18					6.44		.65		.42	82.1	24
SIO-34	29.19	1.94	25.31	26.75	9.39					6.33		.65		.41	81.2	25.9
SIO-39	30.82	1.96	24.93	24.91	10.16					6.77		.07		.33	80.6	28.9
SIO-51	31.34	2.77	26.99	24.50	7.31					6.06		.59		.40	82.8	22.9
SIO-52	31.27	3.91	24.46	25.80	6.14					7.14		.84		.40	81.5	19.2
SIO-53	29.90	2.85	27.46	25.95	6.67					6.07		.67		.38	83.3	20.4
SIO-54	23.08	.25	26.16	37.79	6.38					5.42		.53		.35	87	14.4
SIO-57	32.02	2.47	24.57	23.65	8.99					7.15		.70		.40	80.2	27.5
SIO-60	32.14	2.90	25.54	24.32	7.88					6.16		.63		.38	82	24.4
SIO-61	28.07	2.38	26.48	26.19	7.81					7.77		.78		.47	80.7	22.9
SIO-2012	23.77	1.68	20.23	34.46	10.42					8.08		.90		.43	78.4	23.2
SIO-2013	26.01	.75	24.14	31.07	10.54					6.36		.68		.40	81.2	25.3
SIO-2010	26.35	1.64	26.86	27.84	8.47					7.66		.73		.40	81	23.3
SIO-2011	28.25	1.66	23.66	28.57	9.48					7.18		.72		.45	80.4	24.9
SIO-2018	27.45	1.60	26.39	28.34	8.25					6.89		.67		.38	82.1	22.5
SIO-2014	26.21	.63	23.81	28.79	11.43					7.88		.78		.43	78.8	28.4
SIO-2019	26.24	1.12	23.72	31.14	9.41					7.26		.69		.40	81.1	23.2
SIO-2034	25.48	.90	23.69	34.86	8.26					5.75		.61		.40	84	19.1
SIO-2026	24.83	.57	23.67	31.67	10.92					7.18		.73		.40	80.1	25.6
SIO-2017	28.81	1.68	26.03	26.16	9.05					7.12		.72		.40	81	25.7
SIO-2021	24.34	.87	24.19	30.27	10.29					8.81		.76		.43	78.8	25.3
SIO-2023	25.35	.93	23.91	31.67	9.79					7.24		.67		.40	80.9	23.6

Ref.	Li	Rb	Sr	Ba	V	Cr	Co	Ni	Cu	Zn	Zr	Nb	Sc	Y	K/Rb	Ba/Sr
SIO-11		202	299	343	23	151	6	11		32	89	5		10	177	1.14
SIO-12		226	335	424	29	150	6	15		46	105	4		8	161	1.26
SIO-32		218	312	344	29	166	6	14		27	90	4		12	166	1.10
SIO-34		208	339	435	27	142	7	11		38	98	5		12	169	1.28
SIO-39		177	288	379	25	123	6	11		34	95			13	195	1.31
SIO-51		202	303	364	27	163	5	9		32	104			8	185	1.20
SIO-52		176	217	432	32	168	6	10		40	133			8	193	1.99
SIO-53		187	296	443	21	116	4	5		30	118			9	203	1.49
SIO-54		216	270	416	20	130	3	7		44	96	10		9	168	1.54
SIO-57		192	338	415	31	134	5	10		37	113	10		12	178	1.22
SIO-60		203	308	413	29	164	4	7		34	107	10		9	174	1.34
SIO-61		188	311	442	34	133	5	11		38	119	10		9	195	1.42
SIO-2012		146	481	724	33	110	6	9		47	153			5	192	1.50
SIO-2013		173	353	450	30	143	5	10		33	102			6	194	1.27
SIO-2010		192	340	449	36	164	5	18		36	105			10	194	1.32
SIO-2011		197	344	411	34	175	5	24		38	102			10	166	1.19
SIO-2018		212	319	399	29	166	5	19		56	102			8	172	1.25
SIO-2014		175	364	495	35	172	6	44		42	110			6	189	1.35
SIO-2019		187	326	361	28	150	5	30		45	100			10	176	1.10
SIO-2034		194	303	486	27	155	5	7	25	33	102	8		9	169	1.60
SIO-2026		199	360	470	27	135	5	17	3	55	105	6		12	165	1.30
SIO-2017		206	326	452	32	163	5	17		51	101			11	175	1.38
SIO-2021		208	345	464	28	151	7	9		50	110			15	161	1.34
SIO-2023		194	340	433	25	150	6	10		42	107			11	171	1.27