

Supplementary Data Table: Average data for selected oceanic islands used in diagrams. Data selection procedures and references appear with the associated supplementary material.		Ascension		Gough		Gran Canaria (Canaries)		Tenerife (Canaries)		Sao Lique (Azores)		Faial (Azores)		Easter Island		Kerguelen		Pitcairn		Tristan da Cunha		Reunion		Floresna, Galapagos		Isabela, (Galapagos)		Tutula (Samoa)															
Island	Series	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline	Alkaline														
Type	Mixed	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Mixed	S.D.	No.	Average	S.D.	No.	Average	S.D.														
Stats	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.	Average	S.D.	No.													
SiO2	48.91057	1.33805615	7	49.53011	1.466184	29	45.97026	3.822745661	172	46.49196	2.832041474	82	47.42327	2.360637266	23	49.5653	3.452340388	26	48.66771	1.96115	52	48.07221	2.121963	85	48.24983	2.915833	100	46.30898	2.218985	36	48.09938	1.292057	140	47.45473	0.830006	30	49.10331	0.917095	47	46.84038	1.910545	11	
TiO2	2.98231	0.35976844	7	3.104506	0.398518	29	3.899262	0.601769609	172	3.416781	0.538682736	82	3.44988	0.51921407	23	2.70659	0.494085169	26	3.712799	0.5418715	52	2.9235	0.734846	85	3.29649	0.813827	100	3.50547	0.492234	36	2.704242	0.398027	140	1.450721	0.299446	30	3.399172	0.566789	47	3.93771	0.20704	11	
Al2O3	16.16633	0.48314939	7	14.29655	1.919604	29	12.34707	1.830877851	172	16.39227	1.413747298	82	13.81215	1.413747298	23	17.32479	1.266518001	26	16.80212	1.480077	52	18.10102	1.620213	78	15.25563	1.840771	100	15.36537	1.462332	36	14.17477	1.810181	140	15.40287	0.9370707	47	12.67543	0.832283	11				
FeO	11.86906	0.659861124	7	10.39669	0.899297	29	12.30662	0.839237373	172	10.67255	1.762841194	82	10.8515	1.356507429	23	9.871642	1.396097484	26	10.77087	1.627788	52	12.18992	1.019493	85	11.5937	1.178135	100	11.38053	1.699988	36	11.89153	1.197295	140	9.594642	0.921747	47	12.48543	0.632283	11				
CaO	9.081198	0.85228775	7	8.207396	0.932022	29	10.35571	1.47329007	172	9.446989	2.02014672	82	10.08638	1.519476585	23	8.675731	2.092827752	26	9.788067	1.156117	52	9.589781	1.156117	85	9.757533	3.792328	100	10.20932	1.147358	36	10.73819	1.279514	140	10.87026	1.087091	47	9.42024	0.613983	11				
MgO	5.303941	0.37762616	7	8.010223	3.601095	29	6.653049	3.699552573	172	6.113529	2.251219023	82	6.736687	2.521192529	23	3.440499	2.493359033	26	6.340669	1.6460994	52	7.118023	2.982405	85	7.055227	3.384142	100	6.53145	1.671048	36	5.942034	1.196509	30	5.942034	1.196509	47	9.161403	1.926780	11				
MnO	0.187609	0.020791967	7	0.147205	0.011469	29	0.186655	0.020610733	172	0.199135	0.02216388	82	0.171351	0.014609543	23	0.174271	0.018827149	26	0.166586	0.028912	52	0.189154	0.0216	85	0.166515	0.018754	100	0.179551	0.030834	36	0.197228	0.013468	140	0.189006	0.032016	30	0.204259	0.026139	47	0.176099	0.025442	11	
K2O	1.239089	0.383871258	7	2.460136	0.600073	29	1.103621	0.380917311	172	1.896896	0.61215876	82	1.998652	0.676915859	23	1.780831	0.658057281	26	0.813551	0.720862	52	1.222203	0.577284	85	2.779623	1.280561	100	2.205591	0.294927	36	0.796888	0.159333	140	0.840065	0.294927	47	1.090527	0.140856	11				
Na2O	3.557291	0.361333599	7	3.219771	0.48065	29	2.843304	0.538682736	172	4.45424	1.158719175	82	2.92417	0.622071002	23	4.170832	0.898501316	26	3.267413	0.529461	52	2.913184	0.511684	85	2.675177	0.849187	100	3.570636	0.607242	36	2.620299	0.423139	140	2.91546	0.495661	30	3.18516	0.275259	47	2.909295	0.322809	11	
P2O5	0.69617	0.262914073	7	0.645412	0.141304	29	0.743791	0.370750595	172	0.915572	0.127495134	82	0.545688	0.127495134	23	0.602198	0.172585766	26	0.433065	0.230952	52	0.465898	0.263018	85	0.72146	0.495276	100	0.734073	0.121273	36	0.328332	0.065531	140	0.269946	0.168667	47	0.506395	0.080453	11				
Mg#	0.467783	0.040220621	7	0.580276	0.088906	29	0.587275	0.09092764	172	0.516445	0.069548901	82	0.605552	0.058257683	23	0.495877	0.106393645	26	0.531803	0.071922	52	0.517684	0.096023	85	0.525155	0.085268	100	0.524637	0.062899	36	0.565485	0.086858	140	0.690948	0.049723	30	0.474711	0.058365	47	0.607581	0.046483	11	
B	790		1						1427	811.7232898	7								24.975	29.42708	12																						
S									496.1429	619.0146548	7																																
Cl	3184		1			245.2727	340.2930364	22	365.2857	324.295002	7																																
Li																																											
Cs	0.22	0.320312348	4	0.23	0.095568	4			0.598205	0.444349742	9	0.463333	0.097091023	29	0.296207	0.128074024	29	0.087933	0.048533	15	0.301111	0.198113	27	0.285405	0.304326	37	0.866	0.69037	5	0.500103	0.427863	116	0.140429	0.088645	7	4.809459	28.58741	37					
Rb	38.065	26.04217783	20	47.74138	16.48917	29	25.46455	13.94211474	242	42.41402	14.884209424	87	46.33636	11.98417788	22	38.87742	17.11073171	31	18.85958	22.44954	24	25.91648	19.73342	91	26.67233	27.97763	121	54.30769	17.32834	39	18.01686	5.426206	220	18.91718	8.30316	39	11.20222	8.361267	63	35.76	18.98306	25	
Be																																											
Sc	449.1078	240.2806678	21	768.724	112.2707	29	863.42	530.883736	241	1018.939	248.26829	87	869.999	158.5167138	22	637.871	140.3221989	31	406.125	215.4046	24	481.7033	227.446	91	596.438	227.3472	121	1059.462	220.1549	39	378.6682	86.83551	220	393.4806	98.86681	36	317.427	52.9232	55	526.1538	106.2438	26	
Ba	317.6	112.5218004	20	725.6552	107.2985	29	441.0523	304.1723571	773	639.5698	209.3156239	86	584.195	240.0537824	20	487.2903	188.6012007	31	216.921	198.608	24	291.7039	222.1514	91	276.2479	157.5627	121	665.7949	171.3461	39	378.6682	86.83551	220	326.6043	246.9055	23	120.3414	53.5736	58	221.8173	87.3738	8	
La	42.86923	22.99254896	13	66.40909	15.97349	22	44.98679	22.07602958	134	75.34232	24.81415831	82	50.29	4.577104859	10	42.44828	14.2598242	29	28.62208	20.72452	24	31.64262	17.63261	107	40.89929	25.98954	126	56.65208	12.58875	48	19.75268	4.734424	112	18.73669	15.42671	26	25.60692	15.53153	65	24.06667	13.31778	3	
Ce	87.00769	33.12766874	13	96.17188	20.24927	22	94.62836	38.34014638	134	141.0664	37.47148471	95	105.4465	17.17967428	11	85.46	27.8134462	24	69.0703	38.36361	101	91.4372	55.80264	125	124.43	28.80202	50	45.16776	10.87513	152	30.51593	20.52748	27	56.90405	31.09045	74	56.83333	28.97315	3				
Nd	47.96667	19.06978413	15	51.8	3.17042	23	53.7941	18.73450194	183	61.75484	16.544877	64	47.65217	7.528483462	23	33.78571	5.47500797	7	35.55	18.36534	44	36.10714	15.8462	98	47.03752	24.02701	101	65.04539	15.23888	39	33.23768	15.66537	69	35.5789	11.00209	19							
Sm	11.53727	4.652489851	11	9.85		1	11.27486	3.65092373	107	11.38516	2.960329369	62	3.935909	1.328402761	22	7.9445	1.858880464	20	0.827273	3.684957	44	7.886322	2.796566	98	10.1116	4.491273	100	10.7	2.321996	62	8.573439	1.147141	129	3.121154	0.986494	26	8.53448	3.52815	69	9.5735	4.148788	20	
Eu	3.211538	0.927036912	13	3.36	0.323007	4	3.393571	1.314082367	56	3.553792	0.3050112	53	3.122727	0.3050112	11	2.791724	0.698975781	29	2.328333	0.596029	24	2.4854	0.788073	100	2.915789	1.096482	114	3.173125	0.551105	16	2.042578	1.096482	128	1.10644	0.424769	25							

