

DEPARTMENT OF GEOLOGY

GEOCHEMICAL LABORATORY

CLIENT – SASOL FOUNDATION CO LTD
REQUIRED – ANALYSIS OF CATIONS AND ANIONS IN WATER
AREA – KITUI

RESULTS OF ANIONS

Batch 1

SAMPLE ID	CO ₃ ⁻ mg/l	HCO ₃ ⁻ mg/l	F ⁻ mg/l	NO ₃ ⁻ Mg/l	SO ₄ ⁻ Mg/l
1A	ND	195	0.6	16.8	78
1B	ND	952	0.2	1.2	4.8
2	ND	146	0.5	115.2	28.8
3	12	171	2.3	58.8	62.4
4	ND	464	0.7	12.0	326
5	12	146	0.5	12.0	88.8
6A	24	244	2.0	9.6	4.8
6B	24	561	2.8	46.8	190

Batch 2

1A	12	754	0.91	12.9	47
1H	36	488	0.74	0.8	40
2	ND	171	0.38	46	40
3	ND	268	0.59	13.2	31
4S	12	220	0.56	4.7	29
5K	12	415	0.54	8.2	28
6A	12	293	0.60	8.6	32
6B	36	928	1.52	2.9	80

NOTE – ND: NOT DETECTED

RESULTS OF CATIONS

BATCH 1		
Sample	Element	Concentration (ppm)

1A	Ca	56.0
	Mg	12.4
	K	208.5
	Na	55.0
	Cr	
	Co	0.00
	Zn	0.041
	Cd	
	Pb	0.02
	Fe	0.19
	PH	9.63
1B	Ca	187.0
	Mg	44.8
	K	213.0
	Na	85.0
	Cr	
	Co	0.05
	Zn	0.016
	Cd	
	Pb	0.06
	Fe	4.26
	PH	7.17
2	Ca	51.0
	Mg	9.9
	K	206.3
	Na	29.8
	Cr	
	Co	0.01
	Zn	0.023
	Cd	
	Pb	0.03
	Fe	1.83
	PH	9.27
3	Ca	39.0
	Mg	15.4
	K	212.75
	Na	76.5
	Cr	
	Co	0.002
	Zn	0.011
	Cd	
	Pb	0.01
	Fe	1.94
	PH	9.56
4	Ca	101.0
	Mg	31.1
	K	220.5
	Na	250.0
	Cr	

	Co	0.03
	Zn	0.03
	Cd	
	Pb	0.10
	Fe	0.10
	PH	9.34
5	Ca	72.0
	Mg	10.6
	K	208.3
	Na	91.8
	Cr	
	Co	0.04
	Zn	0.015
	Cd	
	Pb	0.03
	Fe	1.39
	PH	9.22
6A	Ca	72.0
	Mg	12.8
	K	206.8
	Na	117.5
	Cr	
	Co	0.01
	Zn	0.018
	Cd	
	Pb	0.04
	Fe	0.30
	PH	8.93
6B	Ca	65.0
	Mg	16.9
	K	212.0
	Na	276.8
	Cr	
	Co	0.03
	Zn	0.028
	Cd	
	Pb	0.09
	Fe	0.17
	PH	9.53

BATCH 2		
Sample	Element	Concentration (ppm)

1A	Ca	80.0
	Mg	8.8
	K	34.8
	Na	507.0
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	7.58
1H	Ca	20.0
	Mg	117.7
	K	28.5
	Na	265.0
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	9.18
2	Ca	37.0
	Mg	10.2
	K	15.8
	Na	56.3
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	7.60
3	Ca	8.0
	Mg	20.8
	K	13.5
	Na	68.5
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	7.58
4S	Ca	11.0
	Mg	11.6
	K	14.3
	Na	91.3
	Cr	

	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	8.10
5K	Ca	11.0
	Mg	13.3
	K	15.0
	Na	165.3
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	7.58
6A	Ca	23.0
	Mg	16.1
	K	9.3
	Na	136.8
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	8.22
6B	Ca	77.0
	Mg	30.1
	K	16.5
	Na	337.3
	Cr	
	Co	
	Zn	
	Cd	
	Pb	
	Fe	
	PH	7.89



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5th October 2004

The Director,
Sasol Foundation Co. Ltd.
P. O. Box 85
KITUI

Dear Sir,

REF: WATER SAMPLE ANALYSIS

Attached please find a preliminary indication of the analysis that has so far been done.

This represents two batches of samples collected from eight sites per batch.

Please take note that a third batch is with us and similar analysis is being carried out.

A complete water analysis for forty samples will be done at various timings and the final water evaluation will be submitted to you as soon as final sample submissions will have been presented.

In the mean time, we greatly appreciate your continued efforts to evaluate the water quality for the good health of the concerned communities.

We look forward to your continued working together.

Yours faithfully,

Dr. E. M. Mathu
Chairman,
Department of Geology