

<ピンホール試験結果>

D4647 Pinhole Test Data

Sample No. 1-1 Date 12/06/2006
 Density of Specimen D90% (1.515 g/cm³)
 Initial Water Content of Specimen 18.89% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	51	60	0.85				0					
2	5	43	120	0.72				0					
3	5	47	180	0.78				0					
4	5	48	240	0.80				0					
5	5	39	300	0.65				0					
6	5	33	360	0.55			0						
7	5	32	420	0.53			0						
8	5	20	480	0.33			0						
9	5	18	540	0.30				0					
10	5	24	600	0.40				0					
11	18	42	660	0.70		0							
12	18	70	720	1.17		0							
13	18	61	780	1.02		0							
14	18	55	840	0.92		0							
15	18	36	900	0.60		0							
16	38	130	960	2.17	0								
17	38	142	1020	2.37	0								
18	38	152	1080	2.53	0								
19	38	138	1140	2.30	0								
20	38	190	1200	3.17	0								Finish Test
remarks											Classification of Dispersivity		
after first 10min turbidity was not 'Clear'											D2		

D4647 Pinhole Test Data

Sample No. 1-2 Date 12/06/2006
 Density of Specimen D90% (1.571 g/cm³)
 Initial Water Content of Specimen 23.14% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	21	60	0.35						0				
2	5	22	120	0.37						0				
3	5	22	180	0.37							0			
4	5	22	240	0.37							0			
5	5	22	300	0.37							0			
6	5	22	360	0.37							0			
7	5	22	420	0.37							0			
8	5	22	480	0.37							0			
9	5	22	540	0.37							0			
10	5	22	600	0.37							0			
11	18	49	660	0.82							0			
12	18	49	720	0.82							0			
13	18	49	780	0.82							0			
14	18	50	840	0.83							0			
15	18	51	900	0.85							0			
16	38	67	960	1.12							0			
17	38	63	1020	1.05							0			
18	38	50	1080	0.83							0			
19	38	46	1140	0.77							0			
20	38	43	1200	0.72							0		Finish Test	
remarks											Classification of Dispersivity			
											ND1			

D4647 Pinhole Test Data

Sample No. 1-3 Date /06/2006+J42

Density of Specimen D90% (1.624 g/cm³)

Initial Water Content of Specimen 15.08% (Plastic Limit)

Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	31	60	0.52				0					
2	5	30	120	0.50				0					
3	5	30	180	0.50				0					
4	5	31	240	0.52				0					
5	5	30	300	0.50				0					
6	5	27	360	0.45				0					
7	5		420										
8	5	52	480	0.43				0					2min
9	5	26	540	0.43				0					
10	5	22	600	0.37				0					
11	18	50	660	0.83			0						
12	18	49	720	0.82		0							
13	18		780										2min
14	18	98	840	0.82		0							
15	18	82	900	1.37		0							
16	38	164	960	2.73		0							
17	38	161	1020	2.68		0							
18	38	169	1080	2.82		0							
19	38	157	1140	2.62		0							
20	38	165	1200	2.75		0							Finish Test
remarks												Classification of Dispersivity	
after first 10min turbidity was not 'Clear'												D2	

D4647 Pinhole Test Data

Sample No. 1-4 Date 13/06/2006
 Density of Specimen D90% (1.584 g/cm³)
 Initial Water Content of Specimen 13.54% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	29	60	0.48				○						
2	5	35	120	0.58				○						
3	5	46	180	0.77				○						
4	5	52	240	0.87				○						
5	5	53	300	0.88				○						
6	5	57	360	0.95				○						
7	5	57	420	0.95				○						
8	5	56	480	0.93				○						
9	5	57	540	0.95				○						
10	5	58	600	0.97				○						
11	18	130	660	2.17				○						
12	18	133	720	2.22				○						
13	18	131	780	2.18				○						
14	18	131	840	2.18				○						
15	18	130	900	2.17				○					Finish Test	
16	38		960											
17	38		1020											
18	38		1080											
19	38		1140											
20	38		1200											
remarks										Classification of Dispersivity				
after first 10min turbidity was not 'Clear'										D2				

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Pinhole Test Data

Sample No. 1-5 Date 14/06/2006
 Density of Specimen D90% (1.597g/cm3)
 Initial Water Content of Specimen 14.83% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	17	60	0.28				○					
2	5	17	120	0.28				○					
3	5	16	180	0.27				○					
4	5	15	240	0.25				○					
5	5	15	300	0.25				○					
6	5	13	360	0.22				○					
7	5	13	420	0.22				○					
8	5	12	480	0.20				○					
9	5	12	540	0.20				○					
10	5	12	600	0.20				○					
11	18	33	660	0.55			○						
12	18	40	720	0.67			○						
13	18	59	780	0.98			○						
14	18	78	840	1.30			○						
15	18	91	900	1.52			○						
16	38	179	960	2.98			○						
17	38	180	1020	3.00			○						
18	38	181	1080	3.02			○						
19	38	182	1140	3.03			○						
20	38	182	1200	3.03			○						Finish Test
remarks											Classification of Dispersivity		
after first 10min turbidity was not 'Clear'											D2		

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Pinhole Test Data

Sample No. 1-6

Date 15/06/2006

Density of Specimen D90% (1.491 g/cm³)

Initial Water Content of Specimen 11.26% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development

Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	20	60	0.33							<input type="radio"/>		
2	5	20	120	0.33							<input type="radio"/>		
3	5	20	180	0.33							<input type="radio"/>		
4	5	19	240	0.32							<input type="radio"/>		
5	5	19	300	0.32							<input type="radio"/>		
6	5	20	360	0.33							<input type="radio"/>		
7	5	20	420	0.33							<input type="radio"/>		
8	5	20	480	0.33							<input type="radio"/>		
9	5	19	540	0.32							<input type="radio"/>		
10	5	20	600	0.33							<input type="radio"/>		
11	18	42	660	0.70							<input type="radio"/>		
12	18	42	720	0.70							<input type="radio"/>		
13	18	42	780	0.70							<input type="radio"/>		
14	18	42	840	0.70							<input type="radio"/>		
15	18	42	900	0.70							<input type="radio"/>		
16	38	68	960	1.13							<input type="radio"/>		
17	38	68	1020	1.13							<input type="radio"/>		
18	38	68	1080	1.13							<input type="radio"/>		
19	38	67	1140	1.12							<input type="radio"/>		
20	38	68	1200	1.13							<input type="radio"/>		Finish Test
remarks											Classification of Dispersivity		
											ND1		

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Pinhole Test Data

Sample No. 1-7 Date 15/06/2006
 Density of Specimen D90% (1.875 g/cm³)
 Initial Water Content of Specimen 12.67% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	24	60	0.40								○		
2	5	26	120	0.43								○		
3	5	27	180	0.45								○		
4	5	28	240	0.47								○		
5	5	28	300	0.47								○		
6	5	28	360	0.47								○		
7	5	27	420	0.45								○		
8	5	27	480	0.45								○		
9	5	26	540	0.43								○		
10	5	26	600	0.43								○		
11	18	51	660	0.85					○					
12	18	50	720	0.83					○					
13	18	51	780	0.85					○					
14	18	51	840	0.85					○					
15	18	51	900	0.85					○					Finish Test
16	38		960											
17	38		1020											
18	38		1080											
19	38		1140											
20	38		1200											
remarks										Classification of Dispersivity				
after 3rd-step turbidity was 'Slightly Dark'										ND4				

D4647 Pinhole Test Data

Sample No. 1-8 Date 15/06/2006
 Density of Specimen D90% (1.579 g/cm³)
 Initial Water Content of Specimen 13.32% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	10	60	0.17							<input type="radio"/>		
2	5	10	120	0.17							<input type="radio"/>		
3	5	10	180	0.17							<input type="radio"/>		
4	5	10	240	0.17							<input type="radio"/>		
5	5	9	300	0.15							<input type="radio"/>		
6	5	8	360	0.13							<input type="radio"/>		
7	5	8	420	0.13							<input type="radio"/>		
8	5	7	480	0.12							<input type="radio"/>		
9	5	7	540	0.12							<input type="radio"/>		
10	5	7	600	0.12							<input type="radio"/>		
11	18	19	660	0.32							<input type="radio"/>		
12	18	19	720	0.32							<input type="radio"/>		
13	18	19	780	0.32							<input type="radio"/>		
14	18	19	840	0.32							<input type="radio"/>		
15	18	19	900	0.32							<input type="radio"/>		
16	38	33	960	0.55							<input type="radio"/>		
17	38	34	1020	0.57							<input type="radio"/>		
18	38	33	1080	0.55							<input type="radio"/>		
19	38	34	1140	0.57							<input type="radio"/>		
20	38	34	1200	0.57							<input type="radio"/>	Finish Test	
remarks					Classification of Dispersivity								
					ND1								

D4647 Pinhole Test Data

Sample No. 2-2

Date 20/06/2006

Density of Specimen D90% (1.599g/cm³)

Initial Water Content of Specimen 11.9% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development

Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	32	60	0.53							0		
2	5	32	120	0.53							0		
3	5	33	180	0.55							0		
4	5	33	240	0.55							0		
5	5	33	300	0.55							0		
6	5	33	360	0.55							0		
7	5	34	420	0.57							0		
8	5	34	480	0.57							0		
9	5	34	540	0.57							0		
10	5	35	600	0.58							0		
11	18	70	660	1.17							0		
12	18	71	720	1.18							0		
13	18	70	780	1.17							0		
14	18	71	840	1.18							0		
15	18	71	900	1.18							0		
16	38	115	960	1.92							0		
17	38	114	1020	1.90							0		
18	38	115	1080	1.92							0		
19	38	114	1140	1.90							0		
20	38	115	1200	1.92							0	Finish Test	
remarks											Classification of Dispersivity		
											ND2		

D4647

Pinhole Test Data

Sample No. 2-4

Date 20/06/2006

Density of Specimen D90% (1.784g/cm³)

Initial Water Content of Specimen 12.8% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development

Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	36	60	0.60								0		
2	5	35	120	0.58								0		
3	5	36	180	0.60								0		
4	5	36	240	0.60								0		
5	5	37	300	0.62								0		
6	5	36	360	0.60								0		
7	5	38	420	0.63								0		
8	5	38	480	0.63								0		
9	5	37	540	0.62								0		
10	5	37	600	0.62								0		
11	18	73	660	1.22								0		
12	18	74	720	1.23								0		
13	18	74	780	1.23								0		
14	18	75	840	1.25								0		
15	18	75	900	1.25								0		
16	38	118	960	1.97								0		
17	38	116	1020	1.93								0		
18	38	117	1080	1.95								0		
19	38	116	1140	1.93								0		
20	38	117	1200	1.95								0		Finish Test
remarks												Classification of Dispersivity		
												ND2		

D4647

Pinhole Test Data

Sample No. 2-6 Date 21/06/2006
 Density of Specimen D90% (1.875g/cm³)
 Initial Water Content of Specimen 10.3% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	28	60	0.47								0	
2	5	30	120	0.50								0	
3	5	29	180	0.48								0	
4	5	30	240	0.50								0	
5	5	30	300	0.50								0	
6	5	30	360	0.50								0	
7	5	30	420	0.50								0	
8	5	30	480	0.50								0	
9	5	29	540	0.48								0	
10	5	30	600	0.50								0	
11	18	58	660	0.97								0	
12	18	58	720	0.97								0	
13	18	59	780	0.98								0	
14	18	58	840	0.97								0	
15	18	58	900	0.97								0	
16	38	70	960	1.17								0	
17	38	70	1020	1.17								0	
18	38	71	1080	1.18								0	
19	38	72	1140	1.20								0	
20	38	72	1200	1.20								0	Finish Test
remarks											Classification of Dispersivity		
											ND1		

D4647 Pinhole Test Data

Sample No. 3-2

Date 24/06/2006

Density of Specimen D90% (1.543g/cm³)

Initial Water Content of Specimen 21.9% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development

Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	14	60	0.23							○		
2	5	15	120	0.25							○		
3	5	15	180	0.25							○		
4	5	15	240	0.25							○		
5	5	14	300	0.23							○		
6	5	15	360	0.25							○		
7	5	16	420	0.27							○		
8	5	15	480	0.25							○		
9	5	15	540	0.25							○		
10	5	15	600	0.25							○		
11	18	34	660	0.57							○		
12	18	35	720	0.58							○		
13	18	35	780	0.58							○		
14	18	37	840	0.62							○		
15	18	37	900	0.62							○		
16	38	54	960	0.90							○		
17	38	54	1020	0.90							○		
18	38	56	1080	0.93							○		
19	38	56	1140	0.93							○		
20	38	55	1200	0.92							○	Finish Test	
remarks											Classification of Dispersivity		
											ND1		

D4647

Pinhole Test Data

Sample No. 3-4 Date 26/06/2006
 Density of Specimen D90% (1.402g/cm3)
 Initial Water Content of Specimen 23.1% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	19	60	0.32								0		
2	5	19	120	0.32								0		
3	5	18	180	0.30								0		
4	5	19	240	0.32								0		
5	5	19	300	0.32								0		
6	5	19	360	0.32								0		
7	5	19	420	0.32								0		
8	5	18	480	0.30								0		
9	5	19	540	0.32								0		
10	5	18	600	0.30								0		
11	18	34	660	0.57								0		
12	18	35	720	0.58								0		
13	18	36	780	0.60								0		
14	18	35	840	0.58								0		
15	18	36	900	0.60								0		
16	38	58	960	0.97								0		
17	38	60	1020	1.00								0		
18	38	61	1080	1.02								0		
19	38	61	1140	1.02								0		
20	38	62	1200	1.03								0		Finish Test
remarks												Classification of Dispersivity		
												ND1		

D4647

Pinhole Test Data

Sample No. 3-5 Date 27/06/2006

Density of Specimen D90% (1.610g/cm³)

Initial Water Content of Specimen 13.4% (Plastic Limit)

Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top		
1	5	19	60	0.32								○	
2	5	20	120	0.33								○	
3	5	20	180	0.33								○	
4	5	20	240	0.33								○	
5	5	20	300	0.33								○	
6	5	20	360	0.33								○	
7	5	20	420	0.33								○	
8	5	20	480	0.33								○	
9	5	20	540	0.33								○	
10	5	20	600	0.33								○	
11	18	43	660	0.72								○	
12	18	43	720	0.72								○	
13	18	43	780	0.72								○	
14	18	44	840	0.73								○	
15	18	44	900	0.73								○	
16	38	65	960	1.08								○	
17	38	68	1020	1.13								○	
18	38	70	1080	1.17								○	
19	38	69	1140	1.15								○	
20	38	70	1200	1.17								○	Finish Test
remarks												Classification of Dispersivity	
after first 10min turbidity was not 'Clear'												ND1	

D4647 Pinhole Test Data

Sample No. 3-6 Date 27/06/2006
 Density of Specimen D90% (1.667 g/cm³)
 Initial Water Content of Specimen 16.2% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	15	60	0.25							0		
2	5	15	120	0.25							0		
3	5	15	180	0.25							0		
4	5	15	240	0.25							0		
5	5	15	300	0.25							0		
6	5	15	360	0.25							0		
7	5	14	420	0.23							0		
8	5	15	480	0.25							0		
9	5	15	540	0.25							0		
10	5	15	600	0.25							0		
11	18	24	660	0.40							0		
12	18	24	720	0.40							0		
13	18	24	780	0.40							0		
14	18	25	840	0.42							0		
15	18	25	900	0.42							0		
16	38	30	960	0.50							0		
17	38	32	1020	0.53							0		
18	38	34	1080	0.57							0		
19	38	34	1140	0.57							0		
20	38	35	1200	0.58							0		Finish Test
remarks											Classification of Dispersivity		
											ND1		

D4647 Pinhole Test Data

Sample No. 3-7 Date 27/06/2006

Density of Specimen D90% (1.517g/cm³)

Initial Water Content of Specimen 19.0% (Plastic Limit)

Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	19	60	0.32							0		
2	5	19	120	0.32							0		
3	5	20	180	0.33							0		
4	5	19	240	0.32							0		
5	5	20	300	0.33							0		
6	5	20	360	0.33							0		
7	5	20	420	0.33							0		
8	5	20	480	0.33							0		
9	5	20	540	0.33							0		
10	5	20	600	0.33							0		
11	18	34	660	0.57							0		
12	18	35	720	0.58							0		
13	18	35	780	0.58							0		
14	18	37	840	0.62							0		
15	18	37	900	0.62							0		
16	38	50	960	0.83							0		
17	38	52	1020	0.87							0		
18	38	52	1080	0.87							0		
19	38	53	1140	0.88							0		
20	38	53	1200	0.88							0		Finish Test
remarks											Classification of Dispersivity		
after 3rd-step turbidity was 'Slightly Dark'											ND4		

D4647 Pinhole Test Data

Sample No. 3-8 Date 270/06/2006
 Density of Specimen D90% (1.535g/cm3)
 Initial Water Content of Specimen 13.7% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	21	60	0.35							0		
2	5	21	120	0.35							0		
3	5	21	180	0.35							0		
4	5	21	240	0.35							0		
5	5	21	300	0.35							0		
6	5	21	360	0.35							0		
7	5	22	420	0.37							0		
8	5	21	480	0.35							0		
9	5	21	540	0.35							0		
10	5	22	600	0.37							0		
11	18	30	660	0.50							0		
12	18	30	720	0.50							0		
13	18	30	780	0.50							0		
14	18	31	840	0.52							0		
15	18	31	900	0.52							0		
16	38	40	960	0.67							0		
17	38	40	1020	0.67							0		
18	38	40	1080	0.67							0		
19	38	40	1140	0.67							0		
20	38	41	1200	0.68							0		Finish Test
remarks					Classification of Dispersivity								
					ND1								

D4647 Pinhole Test Data

Sample No. 4-1 Date 29/06/2006
 Density of Specimen D90% (1.620g/cm³)
 Initial Water Content of Specimen 13.3% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	18	60	0.30										
2	5	18	120	0.30										
3	5	18	180	0.30										
4	5	18	240	0.30										
5	5	18	300	0.30										
6	5	18	360	0.30										
7	5	18	420	0.30										
8	5	18	480	0.30										
9	5	19	540	0.32										
10	5	19	600	0.32										
11	18	26	660	0.43										
12	18	27	720	0.45										
13	18	27	780	0.45										
14	18	27	840	0.45										
15	18	27	900	0.45										
16	38	43	960	0.72										
17	38	45	1020	0.75										
18	38	56	1080	0.93										
19	38	55	1140	0.92										
20	38	56	1200	0.93										Finish Test
remarks											Classification of Dispersivity			
after first 10min turbidity was not 'Clear'											D2			

D4647

Pinhole Test Data

Sample No. 4-2 Date 27/06/2006

Density of Specimen D90% (1.634 g/cm³)

Initial Water Content of Specimen 14.2% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	14	60	0.23				0					
2	5	14	120	0.23				0					
3	5	14	180	0.23				0					
4	5	14	240	0.23				0					
5	5	14	300	0.23				0					
6	5	14	360	0.23				0					
7	5	14	420	0.23				0					
8	5	14	480	0.23				0					
9	5	14	540	0.23				0					
10	5	14	600	0.23				0					
11	18	33	660	0.55				0					
12	18	38	720	0.63				0					
13	18	40	780	0.67				0					
14	18	42	840	0.70				0					
15	18	42	900	0.70				0					
16	38	70	960	1.17				0					
17	38	75	1020	1.25				0					
18	38	76	1080	1.27				0					
19	38	80	1140	1.33				0					
20	38	86	1200	1.43				0					Finish Test
remarks										Classification of Dispersivity			
after first 10min turbidity was not 'Clear'										D2			

D4647

Pinhole Test Data

Sample No. 4-3 Date 28/06/2006
 Density of Specimen D90% (1.508 g/cm³)
 Initial Water Content of Specimen 20.7% (Plastic Limit)
 Distilled Water added Yes or No use drinking water (pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	14	60	0.23								0		
2	5	15	120	0.25								0		
3	5	15	180	0.25								0		
4	5	15	240	0.25								0		
5	5	15	300	0.25								0		
6	5	16	360	0.27								0		
7	5	16	420	0.27								0		
8	5	16	480	0.13								0		
9	5	17	540	0.28								0		
10	5	17	600	0.28								0		
11	18	35	660	0.58								0		
12	18	35	720	0.58								0		
13	18	35	780	0.58								0		
14	18	35	840	0.29								0		
15	18	36	900	0.60								0		
16	38	57	960	0.95								0		
17	38	58	1020	0.97								0		
18	38	58	1080	0.97								0		
19	38	58	1140	0.97								0		
20	38	60	1200	1.00								0		Finish Test
remarks												Classification of Dispersivity		
												ND1		

D4647 Pinhole Test Data

Sample No. 4-4

Date 28/06/2006

Density of Specimen D90% (1.758g/cm³)

Initial Water Content of Specimen 11.8% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development

Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	12	60	0.20								0		
2	5	12	120	0.20								0		
3	5	12	180	0.20								0		
4	5	12	240	0.20								0		
5	5	12	300	0.20								0		
6	5	12	360	0.20								0		
7	5	12	420	0.20								0		
8	5	12	480	0.20								0		
9	5	12	540	0.20								0		
10	5	12	600	0.20								0		
11	18	31	660	0.52								0		
12	18	31	720	0.52								0		
13	18	33	780	0.55								0		
14	18	33	840	0.55								0		
15	18	34	900	0.57								0		
16	38	55	960	0.92								0		
17	38	61	1020	1.02								0		
18	38	64	1080	1.07								0		
19	38	66	1140	1.10								0		
20	38	68	1200	1.13								0	Finish Test	
remarks					Classification of Dispersivity									
					ND1									

D4647 Pinhole Test Data

Sample No. 4-5 Date 28/06/2006
 Density of Specimen D90% (1.554 g/cm³)
 Initial Water Content of Specimen 16.1% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	10	60	0.17								0		
2	5	10	120	0.17								0		
3	5	10	180	0.17								0		
4	5	10	240	0.17								0		
5	5	10	300	0.17								0		
6	5	10	360	0.17								0		
7	5	10	420	0.17								0		
8	5	10	480	0.17								0		
9	5	10	540	0.17								0		
10	5	10	600	0.17								0		
11	18	37	660	0.62								0		
12	18	39	720	0.65								0		
13	18	39	780	0.65								0		
14	18	39	840	0.65								0		
15	18	39	900	0.65								0		
16	38	49	960	0.82								0		
17	38	50	1020	0.83								0		
18	38	49	1080	0.82								0		
19	38	50	1140	0.83								0		
20	38	50	1200	0.83								0		Finish Test
remarks												Classification of Dispersivity		
												ND1		

D4647 Pinhole Test Data

Sample No. 4-6 Date 28/06/2006

Density of Specimen D90% (1.721 g/cm³)

Initial Water Content of Specimen 14.9% (Plastic Limit)

Distilled Water added Yes or No use drinking water (pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear			
1	5	22	60	0.37							0		
2	5	23	120	0.38							0		
3	5	23	180	0.38							0		
4	5	23	240	0.38							0		
5	5	24	300	0.40							0		
6	5	24	360	0.40							0		
7	5	24	420	0.40							0		
8	5	24	480	0.40							0		
9	5	24	540	0.40							0		
10	5	25	600	0.42							0		
11	18	45	660	0.75							0		
12	18	50	720	0.83							0		
13	18	50	780	0.83							0		
14	18	52	840	0.87							0		
15	18	52	900	0.87							0		
16	38	82	960	1.37							0		
17	38	84	1020	1.40							0		
18	38	84	1080	1.40							0		
19	38	86	1140	1.43							0		
20	38	86	1200	1.43							0	Finish Test	
remarks											Classification of Dispersivity		
											ND1		

D4647 Pinhole Test Data

Sample No. 4-7 Date 29/06/2006
 Density of Specimen D90% (1.819 g/cm³)
 Initial Water Content of Specimen 11.7% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	18	60	0.30							0			
2	5	18	120	0.30							0			
3	5	18	180	0.30							0			
4	5	18	240	0.30							0			
5	5	18	300	0.30							0			
6	5	17	360	0.28							0			
7	5	17	420	0.28							0			
8	5	17	480	0.28							0			
9	5	18	540	0.30							0			
10	5	18	600	0.30							0			
11	18	30	660	0.50							0			
12	18	30	720	0.50							0			
13	18	30	780	0.50							0			
14	18	30	840	0.50							0			
15	18	30	900	0.50							0			
16	38	42	960	0.70							0			
17	38	43	1020	0.72							0			
18	38	43	1080	0.72							0			
19	38	45	1140	0.75							0			
20	38	45	1200	0.75							0		Finish Test	
remarks											Classification of Dispersivity			
											ND1			

D4647 Pinhole Test Data

Sample No. 4-8 Date 29/06/2006
 Density of Specimen D90% (1.588g/cm³)
 Initial Water Content of Specimen 16.1% (Plastic Limit)
 Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	7	60	0.12								○		
2	5	7	120	0.12								○		
3	5	7	180	0.12								○		
4	5	7	240	0.12								○		
5	5	6	300	0.10								○		
6	5	6	360	0.10								○		
7	5	5	420	0.08								○		
8	5	5	480	0.08								○		
9	5	5	540	0.08								○		
10	5	5	600	0.08								○		
11	18	11	660	0.18								○		
12	18	12	720	0.20								○		
13	18	12	780	0.20								○		
14	18	12	840	0.20								○		
15	18	13	900	0.22								○		
16	38	24	960	0.40								○		
17	38	24	1020	0.40								○		
18	38	24	1080	0.40								○		
19	38	25	1140	0.42								○		
20	38	28	1200	0.47								○	Finish Test	
remarks												Classification of Dispersivity		
												ND1		

D4647 Pinhole Test Data

Sample No. 3-3 Date 06/07/2006

Density of Specimen D85% (1.448g/cm³)

Initial Water Content of Specimen 14.7% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	15	60	0.25							0			
2	5	15	120	0.25							0			
3	5	15	180	0.25							0			
4	5	15	240	0.25							0			
5	5	16	300	0.27							0			
6	5	15	360	0.25							0			
7	5	15	420	0.25							0			
8	5	16	480	0.13							0			
9	5	17	540	0.28							0			
10	5	17	600	0.28							0			
11	18	40	660	0.67							0			
12	18	42	720	0.70							0			
13	18	43	780	0.72							0			
14	18	44	840	0.37							0			
15	18	44	900	0.73							0			
16	38	80	960	1.33							0			
17	38	81	1020	1.35							0			
18	38	81	1080	1.35							0			
19	38	81	1140	1.35							0			
20	38	82	1200	1.37							0		Finish Test	
remarks											Classification of Dispersivity			
											ND1			

D4647

Pinhole Test Data

Sample No. 1-1 Date 03/07/2006

Density of Specimen D100% (1.683 g/cm³)

Initial Water Content of Specimen 18.89% (Plastic Limit)

Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks	
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear					
1	5	22	60	0.37								0			
2	5	23	120	0.38								0			
3	5	23	180	0.38								0			
4	5	23	240	0.38								0			
5	5	23	300	0.38								0			
6	5	24	360	0.40								0			
7	5	24	420	0.40								0			
8	5	24	480	0.40								0			
9	5	24	540	0.40								0			
10	5	25	600	0.42								0			
11	18	50	660	0.83								0			
12	18	50	720	0.83								0			
13	18	50	780	0.83								0			
14	18	50	840	0.83								0			
15	18	50	900	0.83								0			
16	38	80	960	1.33								0			
17	38	79	1020	1.32								0			
18	38	79	1080	1.32								0			
19	38	79	1140	1.32								0			
20	38	79	1200	1.32								0		Finish Test	
remarks													Classification of Dispersivity		
													ND1		

D4647 Pinhole Test Data

Sample No. 1-4 Date 03/07/2006
 Density of Specimen D100% (1.760 g/cm³)
 Initial Water Content of Specimen 13.54% (Plastic Limit)
 Distilled Water added Yes or No use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side							Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	
1	5	11	60	0.18				○				
2	5	10	120	0.17				○				
3	5	8	180	0.13				○				
4	5	7	240	0.12				○				
5	5	5	300	0.08				○				
6	5	5	360	0.08				○				
7	5	5	420	0.08				○				
8	5	4	480	0.07				○				
9	5	4	540	0.07				○				
10	5	4	600	0.07				○				Finish Test
11	18		660									
12	18		720									
13	18		780									
14	18		840									
15	18		900									
16	38		960									
17	38		1020									
18	38		1080									
19	38		1140									
20	38		1200									
remarks										Classification of Dispersivity		
after first 10min turbidity was not 'Clear'										D2		

D4647 Pinhole Test Data

Sample No. 1-5 Date 03/07/2006

Density of Specimen D100% (1.774g/cm³)

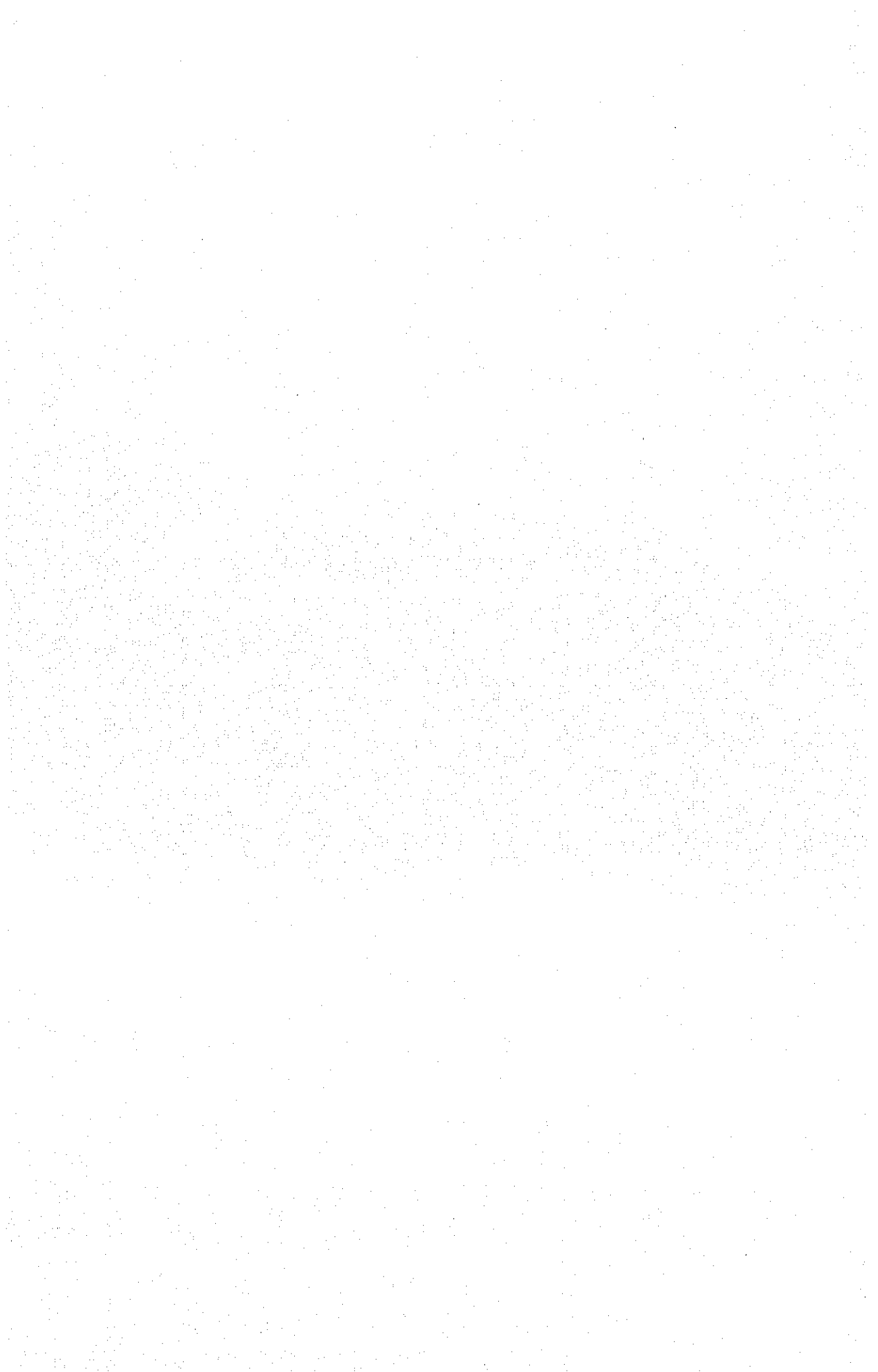
Initial Water Content of Specimen 14.83% (Plastic Limit)

Distilled Water added Yes or (No) use drinking water(pH6.1)

Project The Study on the Road Network Development Name San Virayouth

Time (min)	Head (cm)	Flow		Flow Rate (ml/s)	Turbidity from side								Completely Clear from top	Remarks
		(ml)	(sec)		Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear				
1	5	10	60	0.17							○			
2	5	10	120	0.17							○			
3	5	9	180	0.15							○			
4	5	8	240	0.13							○			
5	5	8	300	0.13							○			
6	5	5	360	0.08								○		
7	5	5	420	0.08								○		
8	5	4	480	0.07								○		
9	5	4	540	0.07								○		
10	5	4	600	0.07								○		
11	18	5	660	0.08								○		
12	18	5	720	0.08								○		
13	18	5	780	0.08								○		
14	18	5	840	0.08								○		
15	18	5	900	0.08								○		
16	38	6	960	0.10								○		
17	38	6	1020	0.10								○		
18	38	6	1080	0.10								○		
19	38	6	1140	0.10								○		
20	38	7	1200	0.12								○		Finish Test
remarks												Classification of Dispersivity		
												ND1		

<化学分析試験結果>





Kingdom of Cambodia
Nation Religion King

Ministry of Environment
Department of Environmental
Pollution Control.

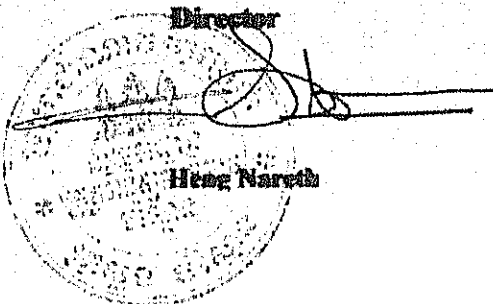
*Environmental Quality Research
and Laboratory Office*

Analysis Report for the Soil test

date: 29 June 2006

No.	Sample Code	Unit	Calcium Ca	Potassium K	Sodium Na	Magnesium Mg
1	No.1-1	mg/kg-dry	119.90	334.48	79.33	144.16
2	No.1-2	mg/kg-dry	106.36	298.20	136.34	153.19
3	No.1-3	mg/kg-dry	33.29	278.95	110.65	119.21
4	No.1-4	mg/kg-dry	27.87	253.40	513.89	129.30
5	No.1-5	mg/kg-dry	90.12	266.36	509.50	138.85
6	No.1-6	mg/kg-dry	38.70	240.08	376.30	101.69
7	No.1-7	mg/kg-dry	30.58	164.19	214.03	145.23
8	No.1-8	mg/kg-dry	71.18	362.24	503.23	139.92
9	No.2-1	mg/kg-dry	36.00	292.27	61.78	134.61
10	No.2-2	mg/kg-dry	41.41	109.03	58.65	66.65
11	No.2-3	mg/kg-dry	63.06	123.09	459.38	119.21
12	No.2-4	mg/kg-dry	46.82	25.00	23.88	30.55
13	No.2-5	mg/kg-dry	41.40	181.58	229.69	110.72
14	No.2-6	mg/kg-dry	38.70	73.12	69.615	97.98
15	No.2-7	mg/kg-dry	36.00	74.23	259.45	97.98
16	No.2-8	mg/kg-dry	30.58	50.53	472.54	117.62
17	No.3-1	mg/kg-dry	843.08	232.67	492.58	159.03
18	No.3-2	mg/kg-dry	263.35	206.76	508.25	152.13
19	No.3-3	mg/kg-dry	60.35	121.61	278.87	144.70
20	No.3-4	mg/kg-dry	73.88	169.74	84.03	148.41
21	No.3-5	mg/kg-dry	95.54	145.67	265.71	153.72
22	No.3-6	mg/kg-dry	268.76	132.72	279.81	155.84
23	No.3-7	mg/kg-dry	114.48	209.35	397.35	150.01
24	No.3-8	mg/kg-dry	157.79	176.77	404.24	161.68
25	No.4-1	mg/kg-dry	33.28	196.76	428.05	131.42
26	No.4-2	mg/kg-dry	36.00	158.63	659.24	126.11
27	No.4-3	mg/kg-dry	30.58	95.70	201.50	105.94
28	No.4-4	mg/kg-dry	25.16	140.12	298.61	115.50
29	No.4-5	mg/kg-dry	22.46	100.51	394.85	76.21
30	No.4-6	mg/kg-dry	38.70	72.74	299.23	119.21
31	No.4-7	mg/kg-dry	25.16	161.96	234.49	108.06
32	No.4-8	mg/kg-dry	38.70	275.61	476.92	142.57

Director



Heng Nareth

Lab-Manager

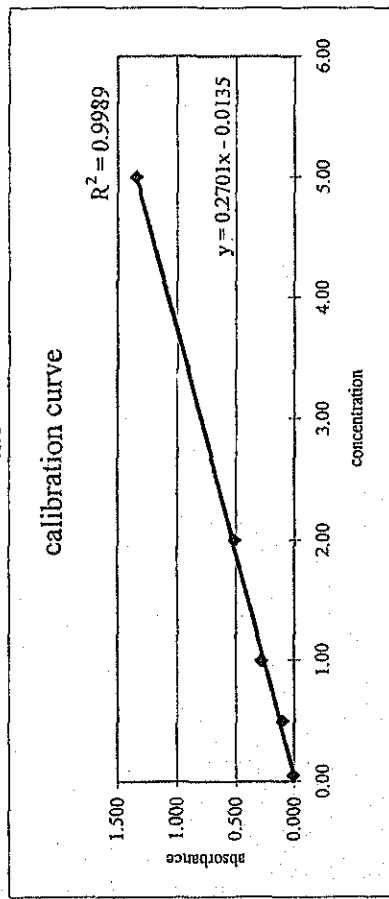
Ty Sotheavann

Potassium(K) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.015			0.015	
1	0.05	0.024			0.024	0.009
2	0.5	0.115			0.115	0.100
3	1.0	0.295			0.295	0.280
4	2.0	0.528			0.528	0.513
5	5.0	1.355			1.355	1.340

correlation coefficient: R = 0.9994352
 Conc. = A * ABS + B
 A(Slope) 3.702 B(intercept) 0.05

K



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.1 - 2 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)							0.015				
23	Nr. 3-7			0.5	0.567			0.567	2.0935	1	0.1047	209.350
24	Nr. 3-8			0.5	0.479			0.479	1.7677	1	0.0884	176.773
25	Nr. 4-1			0.5	0.533			0.533	1.9676	1	0.0984	196.764
26	Nr. 4-2			0.5	0.430			0.430	1.5863	1	0.0793	158.633
27	Nr. 4-3			0.5	0.260			0.260	0.9370	1	0.0478	95.699
28	Nr. 4-4			0.5	0.380			0.380	1.4012	1	0.0701	140.123
29	Nr. 4-5			0.5	0.273			0.273	1.0051	1	0.0503	100.512
30	Nr. 4-6			0.5	0.198			0.198	0.7275	1	0.0364	72.747
31	Nr. 4-7			0.5	0.439			0.439	1.6196	1	0.0810	161.965
32	Nr. 4-8			0.5	0.746			0.746	2.7562	1	0.1378	275.616

Date of analysis : 25/06/2006
 Time of analysis : 8:00
 Name of analyst : Chhek Rath
 Method : Flame Atomic Absorption Spectrometry

Work checked by _____
 Head of Laboratory _____

Potassium(K) in Soil

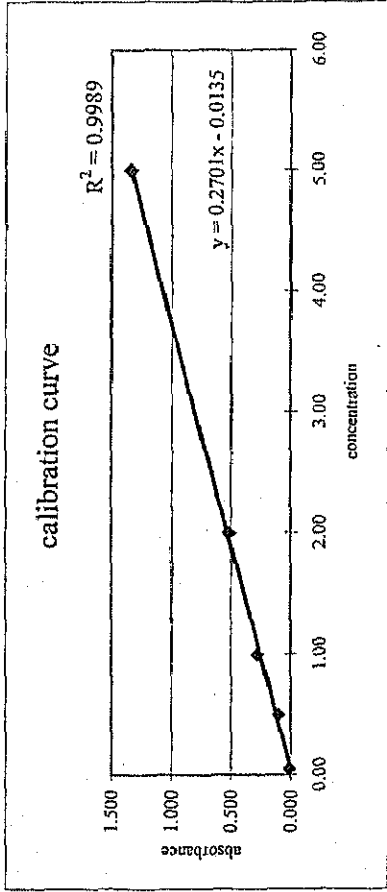
N	Conc. mg/L	ABS			corrected ABS
		1	2	3	
B	BLANK	0.015			0.015
1	0.05	0.024			0.009
2	0.5	0.115			0.100
3	1.0	0.295			0.280
4	2.0	0.528			0.513
5	5.0	1.355			1.340

correlation coefficient: R = 0.9994352

Conc.=A * ABS + B

A(Slope)	B(Intercept)
3.702	0.05

K



Volume after pretreatment 50 mL
Optimum Concentration Range: 0.1 - 2 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			average ABS	corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry	
					1	2	3							
B	BLANK (A _B)	-	-		0.015			0.015	-	-	-	-	-	
12	Nr. 2-4			0.5	0.069			0.069	0.054	0.2499	1	0.0125	24.991	
13	Nr. 2-5			0.5	0.492			0.492	0.477	1.8159	1	0.0908	181.585	
14	Nr. 2-6			0.5	0.199			0.199	0.184	0.7312	1	0.0366	73.117	
15	Nr. 2-7			0.5	0.202			0.202	0.187	0.7423	1	0.0371	74.227	
16	Nr. 2-8			0.5	0.138			0.138	0.123	0.5053	1	0.0253	50.535	
17	Nr. 3-1			0.5	0.630			0.630	0.615	2.3267	1	0.1163	232.673	
18	Nr. 3-2			0.5	0.560			0.560	0.545	2.0676	1	0.1034	206.759	
19	Nr. 3-3			0.5	0.330			0.330	0.315	1.2161	1	0.0608	121.613	
20	Nr. 3-4			0.5	0.460			0.460	0.445	1.6974	1	0.0849	169.739	
21	Nr. 3-5			0.5	0.395			0.395	0.380	1.4568	1	0.0728	145.676	
22	Nr. 3-6			0.5	0.360			0.360	0.345	1.3272	1	0.0664	132.719	
Date of analysis :				25/06/2006	Name of analyst :									Chhek Rath
Time of analysis :				8:00	Work checked by									
Method :				Flame Atomic Absorption Spectrometry	Head of Laboratory									

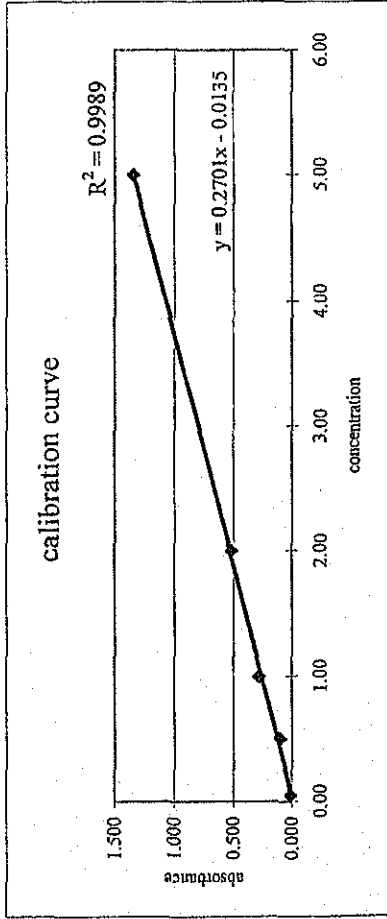
Potassium(K) in Soil

N	Conc. mg/L	ABS			corrected ABS
		1	2	3	
B	BLANK	0.015			0.015
1	0.05	0.024			0.024
2	0.5	0.115			0.115
3	1.0	0.295			0.295
4	2.0	0.528			0.528
5	5.0	1.355			1.355

correlation coefficient: R = 0.9994352
 Conc. = A * ABS + B

A(Slope)	B(Intercept)
3.702	-0.05

K



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.1 - 2 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			average ABS	corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3						
B	BLANK (A _B)	-	-		0.015			0.015	-	-	-	-	-
1	Nb. 1-1			0.5	0.905			0.905	0.890	3.3448	1	0.1672	334.478
2	Nb. 1-2			0.5	0.807			0.807	0.792	2.9820	1	0.1491	298.198
3	Nb. 1-3			0.5	0.755			0.755	0.740	2.7895	1	0.1395	278.948
4	Nb. 1-4			0.5	0.686			0.686	0.671	2.5340	1	0.1267	253.404
5	Nb. 1-5			0.5	0.721			0.721	0.706	2.6636	1	0.1332	266.361
6	Nb. 1-6			0.5	0.650			0.650	0.635	2.4008	1	0.1200	240.077
7	Nb. 1-7			0.5	0.445			0.445	0.430	1.6419	1	0.0821	164.186
8	Nb. 1-8			0.5	0.980			0.980	0.965	3.6224	1	0.1811	362.243
9	Nb. 2-1			0.5	0.791			0.791	0.776	2.9228	1	0.1461	292.275
10	Nb. 2-2			0.5	0.296			0.296	0.281	1.0903	1	0.0545	109.026
11	Nb. 2-3			0.5	0.334			0.334	0.319	1.2309	1	0.0615	123.094

Date of analysis :	25/06/2006	Name of analyst :	Chhek Rath
Time of analysis :	8:00		
Method :	Flame Atomic Absorption Spectrometry		

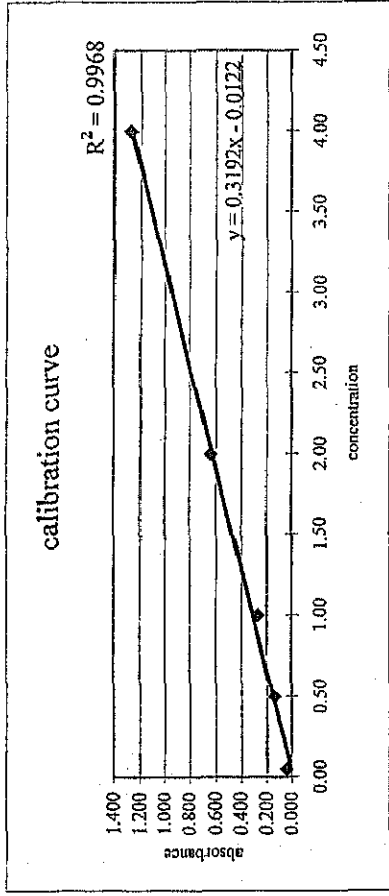
Work checked by _____
 Head of Laboratory _____

Sodium(Na) in Soil

N	Conc. mg/L	ABS			corrected ABS
		1	2	3	
B	BLANK	0.014			0.014
1	0.05	0.054			0.054
2	0.5	0.150			0.136
3	1.0	0.280			0.266
4	2.0	0.650			0.636
5	4.0	1.285			1.271

correlation coefficient: $R = 0.9983797$
 $Conc. = A * ABS + B$
 A(Slope) 3.1326 B(Intercept) 0.0383

Na



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.05 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-	-	0.014			0.014	-	-	-	-
23	Nr. 3-7			0.5	0.636			0.636	1.9868	2	0.1987	397.355
24	Nr. 3-8			0.5	0.647			0.647	2.0212	2	0.2021	404.247
25	Nr. 4-1			0.5	0.685			0.685	2.1403	2	0.2140	428.055
26	Nr. 4-2			0.5	1.054			1.054	3.2962	2	0.3296	659.241
27	Nr. 4-3			0.5	0.645			0.645	2.0150	1	0.1007	201.497
28	Nr. 4-4			0.5	0.955			0.955	2.9861	1	0.1493	298.608
29	Nr. 4-5			0.5	0.632			0.632	1.9742	2	0.1974	394.849
30	Nr. 4-6			0.5	0.957			0.957	2.9923	1	0.1496	299.234
31	Nr. 4-7			0.5	0.750			0.750	2.3439	1	0.1172	234.389
32	Nr. 4-8			0.5	0.763			0.763	2.3846	2	0.2385	476.923
					#DIV/0!			#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!

Date of analysis : 25/06/2006
 Time of analysis : 8:00
 Name of analyst : Chhek Rath
 Method : Flame Atomic Absorption Spectrometry

Work checked by _____
 Head of Laboratory _____

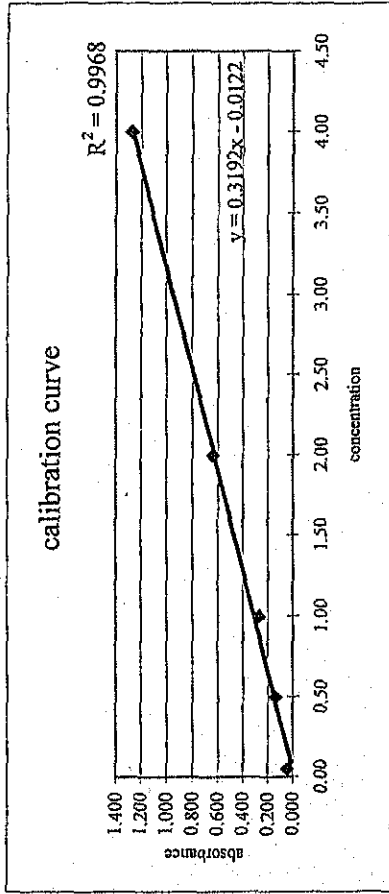
Sodium(Na) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.014			0.014	
1	0.05	0.054			0.054	0.040
2	0.5	0.150			0.150	0.136
3	1.0	0.280			0.280	0.266
4	2.0	0.650			0.650	0.636
5	4.0	1.285			1.285	1.271

correlation coefficient: R = 0.9983797
 Conc. = A * ABS + B

A(Slope)	B(Intercept)
3.1326	0.0383

Na



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.05 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-		0.014			0.014	-	-	-	-
12	Nr. 2-4			0.5	0.078			0.078	0.2388	1	0.0119	23.879
13	Nr. 2-5			0.5	0.735			0.735	2.2969	1	0.1148	229.690
14	Nr. 2-6			0.5	0.224			0.224	0.6961	1	0.0348	69.615
15	Nr. 2-7			0.5	0.830			0.830	2.5945	1	0.1297	259.450
16	Nr. 2-8			0.5	0.756			0.756	2.3627	2	0.2363	472.538
17	Nr. 3-1			0.5	0.788			0.788	2.4629	2	0.2463	492.586
18	Nr. 3-2			0.5	0.813			0.813	2.5412	2	0.2541	508.249
19	Nr. 3-3			0.5	0.892			0.892	2.7887	1	0.1394	278.872
20	Nr. 3-4			0.5	0.270			0.270	0.8402	1	0.0420	84.025
21	Nr. 3-5			0.5	0.850			0.850	2.6572	1	0.1329	265.715
22	Nr. 3-6			0.5	0.895			0.895	2.7981	1	0.1399	279.812

Date of analysis :	25/06/2006	Name of analyst :	Chhek Rath
Time of analysis :	8:00		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____
 Head of Laboratory _____

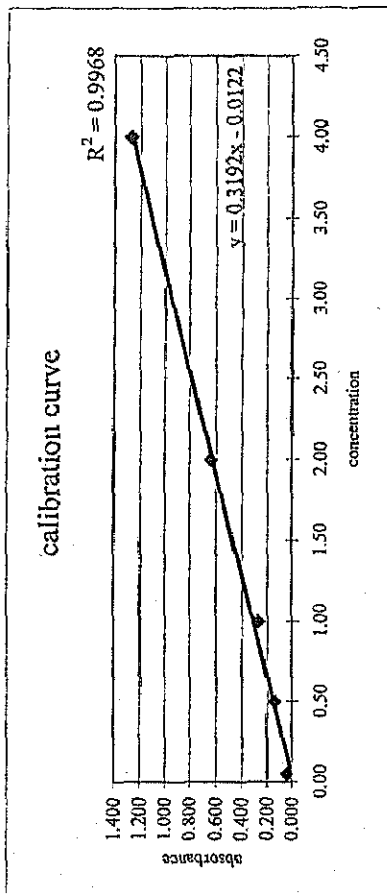
Sodium(Na) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.014			0.014	
1	0.05	0.054			0.054	0.040
2	0.5	0.150			0.150	0.136
3	1.0	0.280			0.280	0.266
4	2.0	0.650			0.650	0.636
5	4.0	1.285			1.285	1.271

correlation coefficient: R = 0.9983797
 Conc.=A * ABS + B

A(Slope)	B(intercept)
3.1326	0.0383

Na



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.05 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analys. (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-		0.014							
1	N _{o.} 1-1			0.5	0.255			0.241	0.7933	1	0.0397	79.326
2	N _{o.} 1-2			0.5	0.437			0.423	1.3634	1	0.0682	136.339
3	N _{o.} 1-3			0.5	0.355			0.341	1.1065	1	0.0553	110.652
4	N _{o.} 1-4			0.5	0.822			0.808	2.5694	2	0.2569	513.888
5	N _{o.} 1-5			0.5	0.815			0.801	2.5475	2	0.2548	509.503
6	N _{o.} 1-6			0.5	1.203			1.189	3.7630	1	0.1881	376.296
7	N _{o.} 1-7			0.5	0.685			0.671	2.1403	1	0.1070	214.027
8	N _{o.} 1-8			0.5	0.805			0.791	2.5162	2	0.2516	503.237
9	N _{o.} 2-1			0.5	0.199			0.185	0.6178	1	0.0309	61.783
10	N _{o.} 2-2			0.5	0.189			0.175	0.5865	1	0.0293	58.651
11	N _{o.} 2-3			0.5	0.735			0.721	2.2969	2	0.2297	459.381

Name of analyst : Chhok Rath

Date of analysis : 25/06/2006

Time of analysis : 8:00

Method : Flame Atomic Absorption Spectrometry

Work checked by
 Head of Laboratory

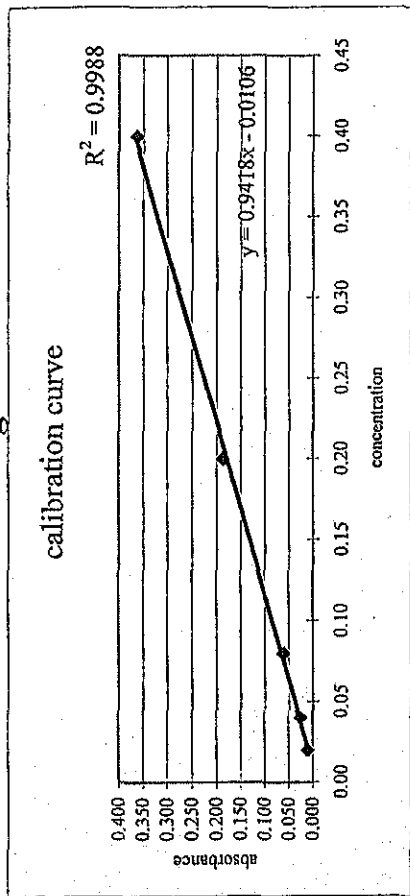
Magnesium(Mg) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.015			0.015	
1	0.02	0.025			0.025	0.010
2	0.04	0.039			0.039	0.024
3	0.08	0.076			0.076	0.061
4	0.2	0.201			0.201	0.186
5	0.4	0.378			0.378	0.363

correlation coefficient: $R = 0.9994065$
 $Conc. = A * ABS + B$

A(Slope)	B(Intercept)
1.0618	0.0112

Volume after pretreatment	50 mL
Optimum Concentration Range:	0.02 - 0.4 mg/L



No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analys. (g-dry)	ABS			average ABS	corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3						
B	BLANK (A _B)	-	-		0.015			0.015	-	-	-	-	-
23	Nr. 3-7			0.5	0.287			0.287	0.272	0.30001	5	0.075002	150.005
24	Nr. 3-8			0.5	0.309			0.309	0.294	0.32337	5	0.080842	161.685
25	Nr. 4-1			0.5	0.252			0.252	0.237	0.26285	5	0.065712	131.423
26	Nr. 4-2			0.5	0.242			0.242	0.227	0.25223	5	0.063057	126.114
27	Nr. 4-3			0.5	0.204			0.204	0.189	0.21188	5	0.05297	105.940
28	Nr. 4-4			0.5	0.222			0.222	0.207	0.23099	5	0.057748	115.496
29	Nr. 4-5			0.5	0.148			0.148	0.133	0.15242	5	0.038105	76.210
30	Nr. 4-6			0.5	0.229			0.229	0.214	0.23843	5	0.059606	119.213
31	Nr. 4-7			0.5	0.208			0.208	0.193	0.21613	5	0.054032	108.064
32	Nr. 4-8			0.5	0.273			0.273	0.258	0.28514	5	0.071286	142.572

Date of analysis :	25/06/2006	Name of analyst :	Chhek Rath
Time of analysis :	8:00		
Method : Flame Atomic Absorption Spectrometry			

Work checked by _____
 Head of Laboratory _____

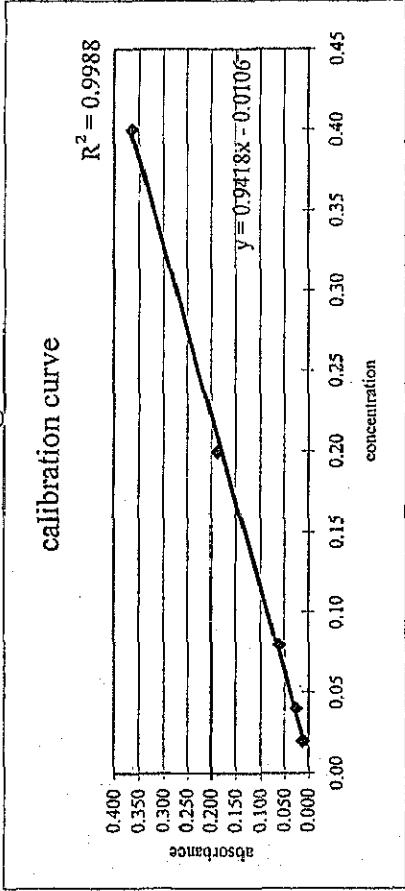
Magnesium(Mg) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.015			0.015	
1	0.02	0.025			0.025	0.010
2	0.04	0.039			0.039	0.024
3	0.08	0.076			0.076	0.061
4	0.2	0.201			0.201	0.186
5	0.4	0.378			0.378	0.363

correlation coefficient: R = 0.9994065
Conc.=A * ABS + B

A(Slope)	B(Intercept)
1.0618	0.0112

Mg



Volume after pretreatment 50 mL
Optimum Concentration Range: 0.02 - 0.4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-		0.015			0.015	-	-	-	-
12	No. 2-4			0.5	0.062			0.062	0.0611	5	0.0153	30.552
13	No. 2-5			0.5	0.213			0.213	0.2214	5	0.0554	110.718
14	No. 2-6			0.5	0.189			0.189	0.1960	5	0.0490	97.977
15	No. 2-7			0.5	0.189			0.189	0.1960	5	0.0490	97.977
16	No. 2-8			0.5	0.226			0.226	0.2352	5	0.0588	117.620
17	No. 3-1			0.5	0.304			0.304	0.3181	5	0.0795	159.030
18	No. 3-2			0.5	0.291			0.291	0.3043	5	0.0761	152.128
19	No. 3-3			0.5	0.277			0.277	0.2894	5	0.0723	144.696
20	No. 3-4			0.5	0.284			0.284	0.2968	5	0.0742	148.412
21	No. 3-5			0.5	0.294			0.294	0.3074	5	0.0769	153.721
22	No. 3-6			0.5	0.298			0.298	0.3117	5	0.0779	155.845

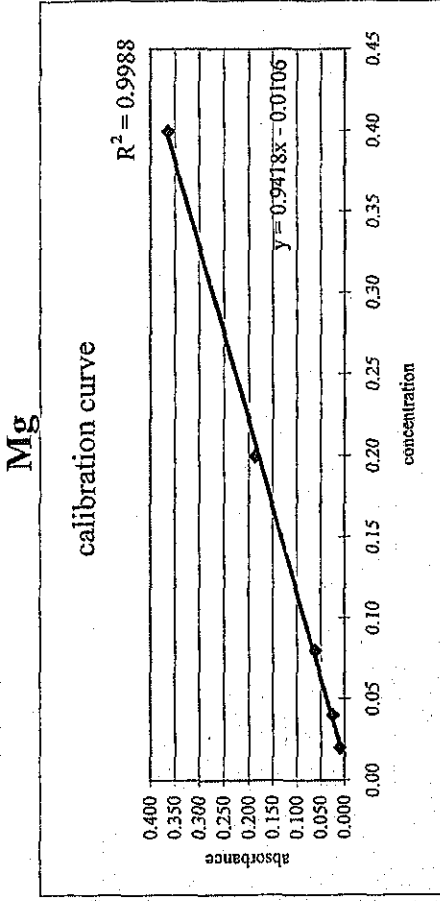
Date of analysis :	25/06/2006	Name of analyst :	Chhkek Rath
Time of analysis :	8:00		
Method : Flame Atomic Absorption Spectrometry			

Work checked by _____
Head of Laboratory _____

Magnesium(Mg) in Soil

N	Conc. mg/L	ABS			corrected ABS
		1	2	3	
B	BLANK	0.015			0.015
1	0.02	0.025			0.010
2	0.04	0.039			0.024
3	0.08	0.076			0.061
4	0.2	0.201			0.186
5	0.4	0.378			0.363

correlation coefficient: R = 0.9994065
 Conc.=A * ABS + B
 A(Slope) 1.0618 B(Intercept) 0.0112



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.02 - 0.4 mg/L

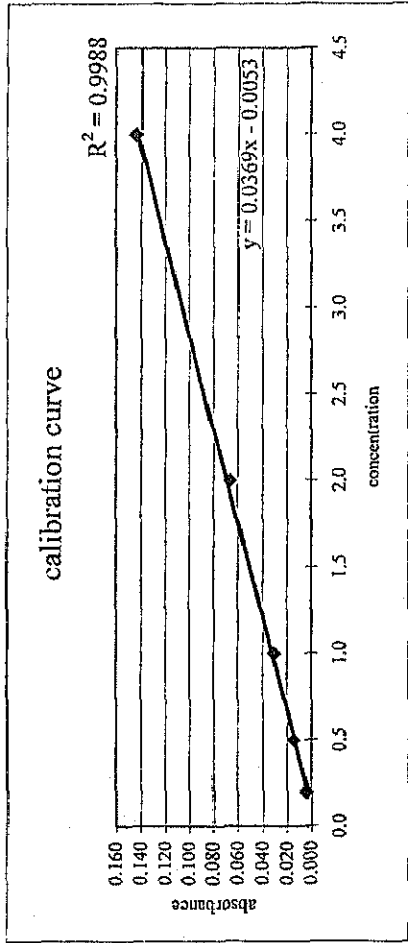
No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-		0.015			0.015	-	-	-	-
1	Nb. 1-1			0.5	0.276			0.276	0.2883	5	0.0721	144.165
2	Nb. 1-2			0.5	0.293			0.293	0.3064	5	0.0766	153.190
3	Nb. 1-3			0.5	0.229			0.229	0.2384	5	0.0596	119.213
4	Nb. 1-4			0.5	0.248			0.248	0.2586	5	0.0646	129.300
5	Nb. 1-5			0.5	0.266			0.266	0.2777	5	0.0694	138.856
6	Nb. 1-6			0.5	0.196			0.196	0.2034	5	0.0508	101.693
7	Nb. 1-7			0.5	0.278			0.278	0.2905	5	0.0726	145.227
8	Nb. 1-8			0.5	0.268			0.268	0.2798	5	0.0700	139.918
9	Nb. 2-1			0.5	0.258			0.258	0.2692	5	0.0673	134.609
10	Nb. 2-2			0.5	0.130			0.130	0.1333	5	0.0333	66.654
11	Nb. 2-3			0.5	0.229			0.229	0.2384	5	0.0596	119.213
Date of analysis :		25/06/2006		Name of analyst :		Chhek Rath						
Time of analysis :		8:00		Method :		Flame Atomic Absorption Spectrometry						
Work checked by _____												
Head of Laboratory _____												

Calcium(Ca) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.004			0.004	
1	0.2	0.008			0.008	0.004
2	0.5	0.018			0.018	0.014
3	1.0	0.034			0.034	0.030
4	2.0	0.070			0.070	0.066
5	4.0	0.148			0.148	0.144

Correlation coefficient: R = 0.999376859
Conc. = A * ABS + B

A(Slope)	B(Intercept)
27.0661	0.1434



Volume after pretreatment	50 mL
Optimum Concentration Range:	0.2 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3					
B	BLANK (A _B)	-	-		0.004			0.004	-	-	-	-
23	Nr. 3-7			0.5	0.041			0.041	1.14485	1	0.05724229	114.485
24	Nr. 3-8			0.5	0.057			0.057	1.5779	1	0.07889517	157.790
25	Nr. 4-1			0.5	0.011			0.011	0.33286	1	0.01664314	33.286
26	Nr. 4-2			0.5	0.012			0.012	0.35993	1	0.01799644	35.993
27	Nr. 4-3			0.5	0.010			0.010	0.3058	1	0.01528983	30.580
28	Nr. 4-4			0.5	0.008			0.008	0.25166	1	0.01258322	25.166
29	Nr. 4-5			0.5	0.007			0.007	0.2246	1	0.01122992	22.460
30	Nr. 4-6			0.5	0.013			0.013	0.38699	1	0.01934975	38.699
31	Nr. 4-7			0.5	0.008			0.008	0.25166	1	0.01258322	25.166
32	Nr. 4-8			0.5	0.013			0.013	0.38699	1	0.01934975	38.699
					#DIV/0!			#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!

Date of analysis :	25/06/2006	Name of analyst :	Chhek Rath
Time of analysis :	8:00		
Method :	Flame Atomic Absorption Spectrometry		

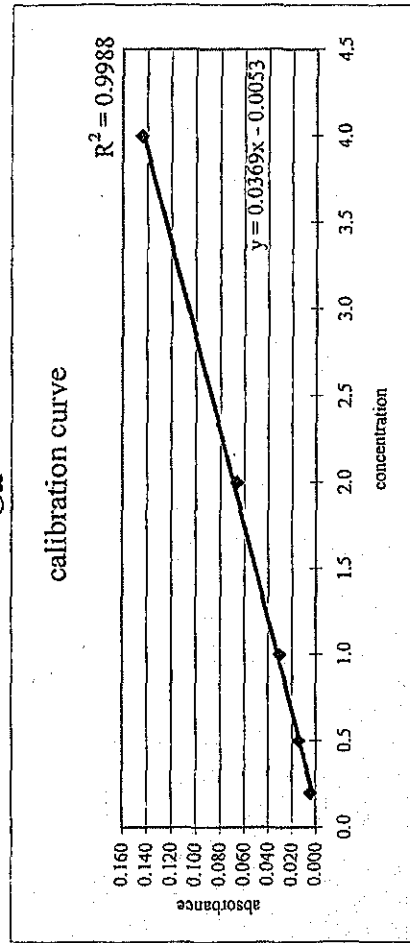
Work checked by _____
Head of Laboratory _____

Calcium(Ca) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.004			0.004	
1	0.2	0.008			0.008	0.004
2	0.5	0.018			0.018	0.014
3	1.0	0.034			0.034	0.030
4	2.0	0.070			0.070	0.066
5	4.0	0.148			0.148	0.144

Correlation coefficient: R = 0.999376859
 Conc. = A * ABS + B

A(Slope)	B(Intercept)
27.0661	0.1434



Volume after pretreatment	50 mL
Optimum Concentration Range	0.2 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			average ABS	corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3						
B	BLANK (A _B)	-	-					0.004	-	-	-	-	-
12	Nr. 2-4			0.5				0.016	0.012	0.46819	1	0.02340966	46.819
13	Nr. 2-5			0.5				0.014	0.010	0.41406	1	0.02070305	41.406
14	Nr. 2-6			0.5				0.013	0.009	0.38699	1	0.01934975	38.699
15	Nr. 2-7			0.5				0.012	0.008	0.35993	1	0.01799644	35.993
16	Nr. 2-8			0.5				0.010	0.006	0.3058	1	0.01528983	30.580
17	Nr. 3-1			0.5				0.061	0.057	1.68617	5	0.42154193	843.084
18	Nr. 3-2			0.5				0.096	0.092	2.63348	1	0.13167406	263.348
19	Nr. 3-3			0.5				0.021	0.017	0.60352	1	0.03017619	60.352
20	Nr. 3-4			0.5				0.026	0.022	0.73885	1	0.03694271	73.885
21	Nr. 3-5			0.5				0.034	0.030	0.95538	1	0.04776915	95.538
22	Nr. 3-6			0.5				0.098	0.094	2.68761	1	0.13438067	268.761

Date of analysis :	25/06/2006	Name of analyst :	Chihck Rath
Time of analysis :	8:00		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____
 Head of Laboratory _____

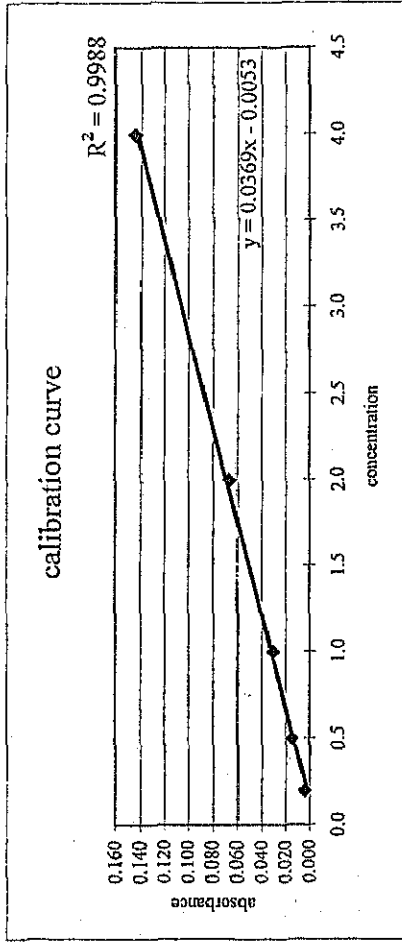
Calcium(Ca) in Soil

N	Conc. mg/L	ABS			average ABS	corrected ABS
		1	2	3		
B	BLANK	0.004			0.004	
1	0.2	0.008			0.008	0.004
2	0.5	0.018			0.018	0.014
3	1.0	0.034			0.034	0.030
4	2.0	0.070			0.070	0.066
5	4.0	0.148			0.148	0.144

Correlation coefficient: R = 0.999376859
 Conc.=A * ABS + B

A(Slope)	B(Intercept)
27.0661	0.1434

Ca



Volume after pretreatment 50 mL
 Optimum Concentration Range: 0.2 - 4 mg/L

No.	Sample point	Date of taking sample	Time of taking sample	Soil weight for analysis (g-dry)	ABS			average ABS	corrected ABS (ABS-A _B)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
					1	2	3						
B	BLANK (A _B)	-	-					0.004	-	-	-	-	-
1	No. 1-1			0.5	0.043			0.043	0.039	1.19898	1	0.0599489	119.898
2	No. 1-2			0.5	0.038			0.038	0.034	1.06365	1	0.05318237	106.365
3	No. 1-3			0.5	0.011			0.011	0.007	0.33286	1	0.01664314	33.286
4	No. 1-4			0.5	0.009			0.009	0.005	0.27873	1	0.01393653	27.873
5	No. 1-5			0.5	0.032			0.032	0.028	0.90125	1	0.04506254	90.125
6	No. 1-6			0.5	0.013			0.013	0.009	0.38699	1	0.01934975	38.699
7	No. 1-7			0.5	0.010			0.010	0.006	0.3058	1	0.01528983	30.580
8	No. 1-8			0.5	0.025			0.025	0.021	0.71179	1	0.03558941	71.179
9	No. 2-1			0.5	0.012			0.012	0.008	0.35993	1	0.01799644	35.993
10	No. 2-2			0.5	0.014			0.014	0.010	0.41406	1	0.02070305	41.406
11	No. 2-3			0.5	0.022			0.022	0.018	0.63059	1	0.03152949	63.059

Date of analysis :	25/06/2006	Name of analyst :	Chhek Rath
Time of analysis :	8:00		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____
 Head of Laboratory _____