混合土の試験結果

＜分散性判定試験結果＞

＜クラム試験結果＞

CRUMB TEST FOR DISPERSIBILITY OF CLAYEY SOILS

condition of sample : disturbed soil
condition of specimen : 1.7cm cubic, degree of compaction 90%, water content :plastic limit

Sample No. Mix2-8-1 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	2	30	4	29	4	29.5
2	2	2	30	4	29	4	29.5
				Judgement		Grade 4	

Sample No. Mix2-8-2 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	2	30	4	29	4	29.5
2	2	2	30	4	29	4	29.5
				Judgement		Grade 4	

Sample No. Mix2-8-3 Date 12/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	2	29	4	29	4	29
2	2	2	29	4	29	4	29
				Judgement		Grade 4	

Sample No. Mix2-8-4 Date 12/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	1	28.5	2	28.5	4	29
2	2	1	28.5	2	28.5	4	29
				Judgement		Grade 4	

CRUMB TEST FOR DISPERSIBILITY OF CLAYEY SOILS

condition of sample : disturbed soil
condition of specimen : 1.7cm cubic, degree of compaction 90%, water content :plastic limit
curing time : 1 day

Sample No. Mix1-4 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	3	30	4	29.5	4	30
2	2	3	30	4	29.5	4	30
				Judgement		Grade 4	

Sample No. Mix1-5 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	3	30	4	29.5	4	29
2	2	3	30	4	29.5	4	29
				Judgement		Grade 4	

Sample No. Mix4-1 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	3	30	4	29.5	4	29
2	2	3	30	4	29.5	4	29
				Judgement		Grade 4	

Sample No. Mix4-2 Date 11/07/2006

Specimen Number	Dish Number	2 min		1 hour		6 hours	
		Grade	^{0}C	Grade	^{0}C	Grade	^{0}C
1	1	2	30	4	29.5	4	29
2	2	2	30	4	29.5	4	29
				Judgement		Grade 4	

＜ダブルハイドロメータ試験結果＞

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

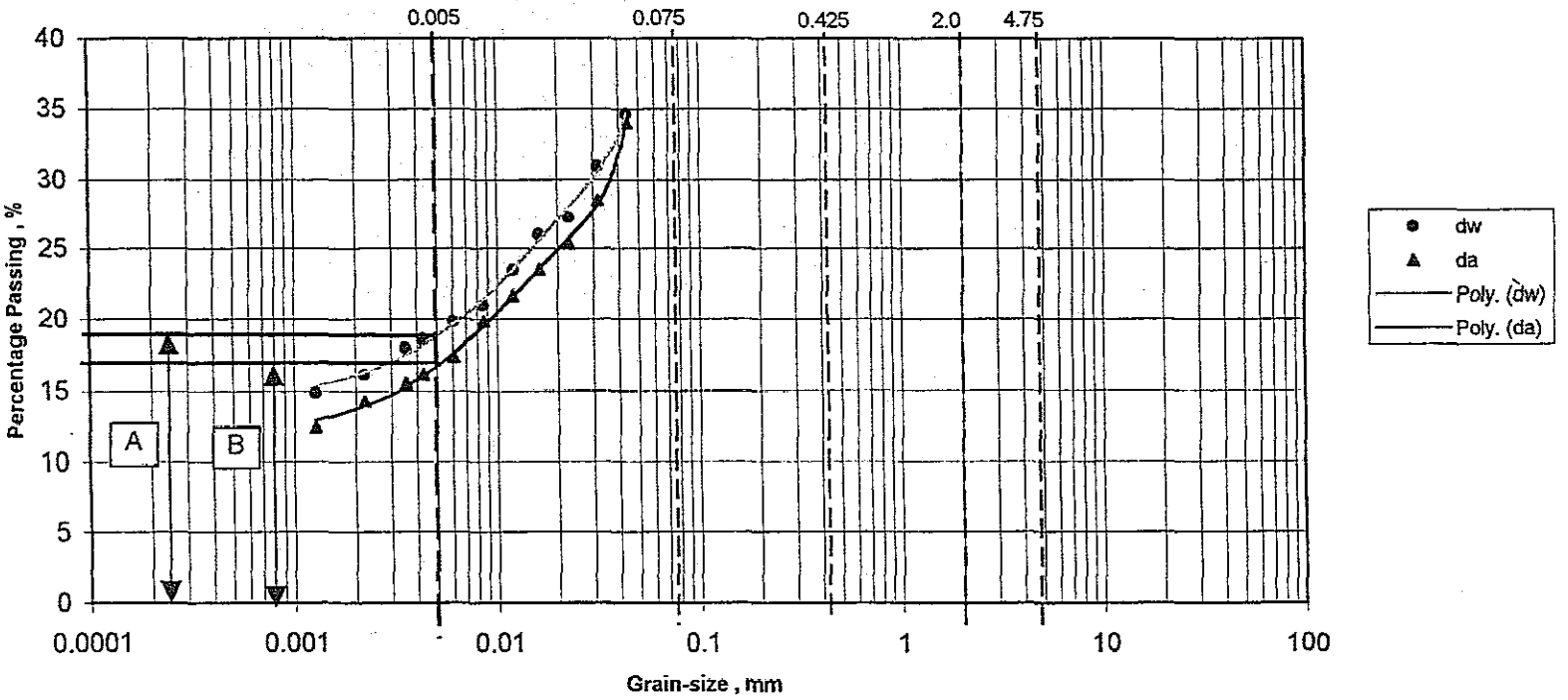
Sample No.: **Mix 1-4** Testing Date : 6-Jul-06

Depth :

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Comments

A= 19 %

B= 16.7 %

% Dispersion = **113.77**

Remark :

dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

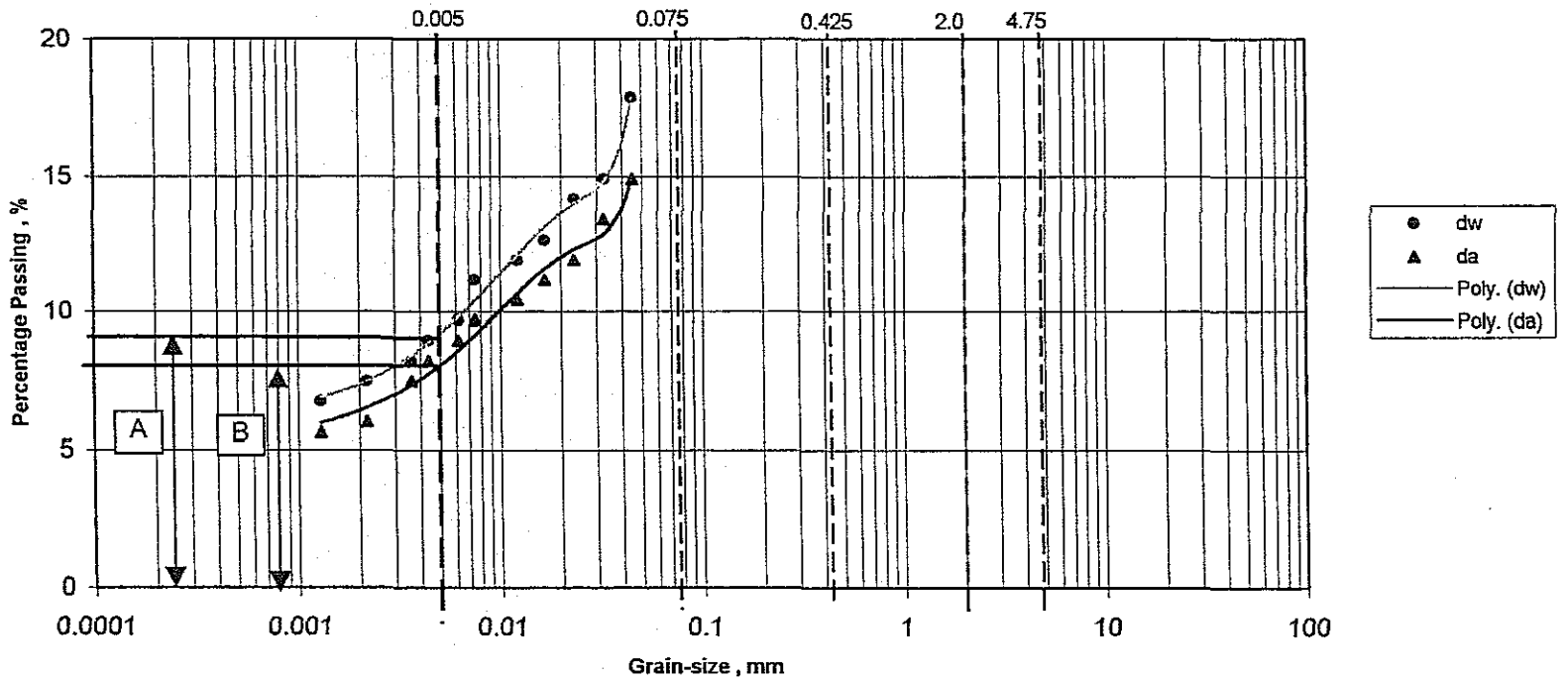
Sample No.: **Mix 1-5**
Depth :

Testing Date : 6-Jul-06

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



Comments
A= 9 %
B= 8.5 %

% Dispersion = **105.88**

CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Remark :
dw - Specimen soaked in Distilled Water

da - Specimen soaked in *Dispersing Agent*

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

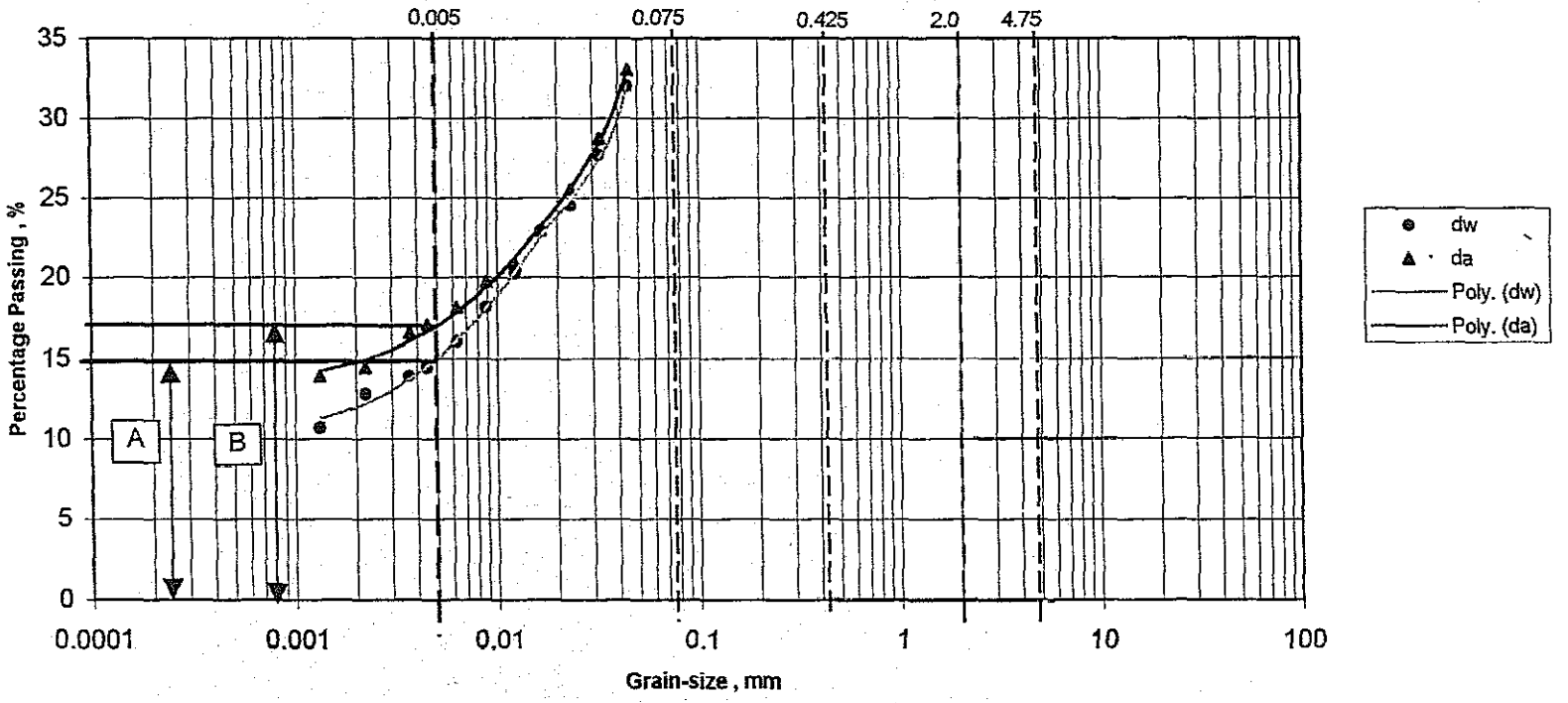
PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

Sample No.: **Mix 4-1**
Depth :
Testing Date : 6-Jul-06

Checked by Ket Chansavuth
Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Comments
A= 15 %
B= 17.5 %

% Dispersion = **85.71**

Remark :
dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

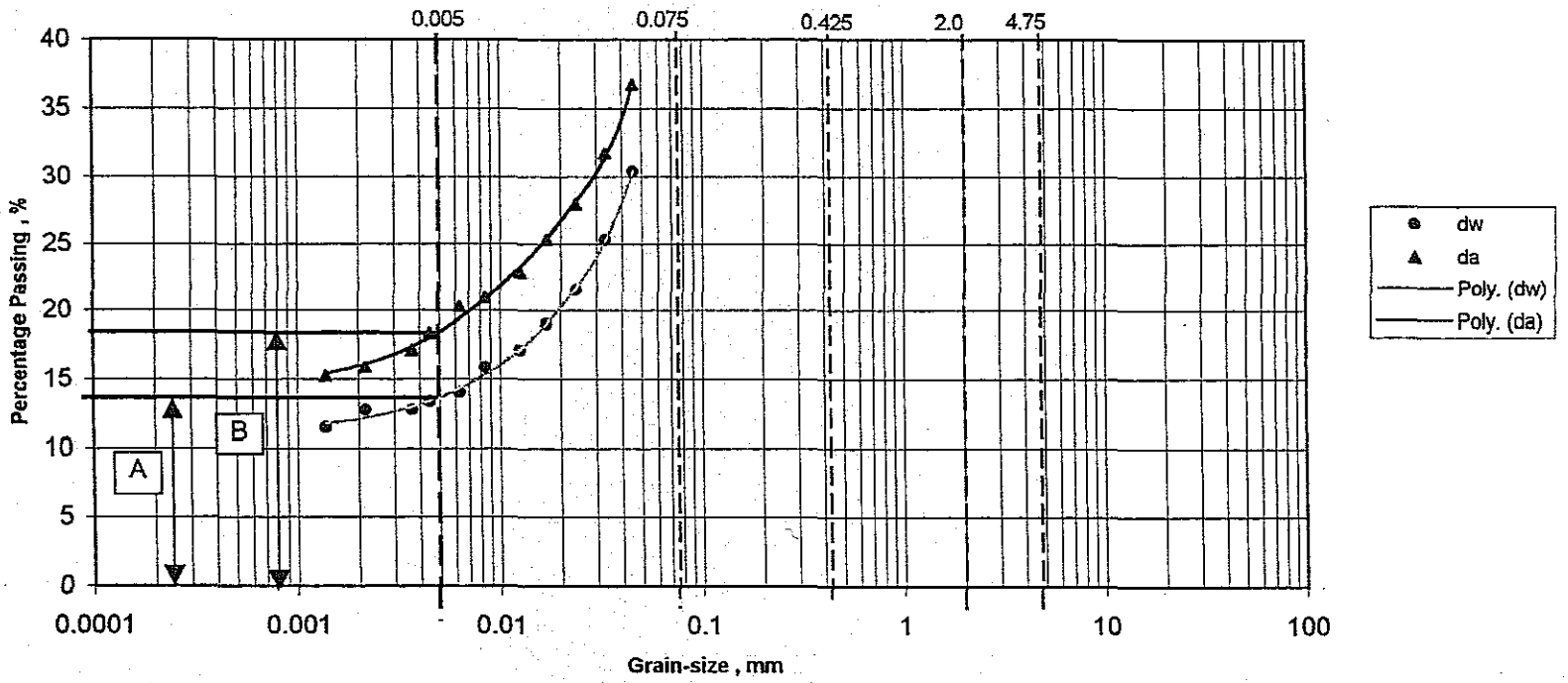
Sample No.: Mix 4-2 Testing Date : 6-Jul-06

Depth :

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



Comments

A= 13.5 %

B= 19.2 %

% Dispersion = **70.31**

CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Remark :

dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

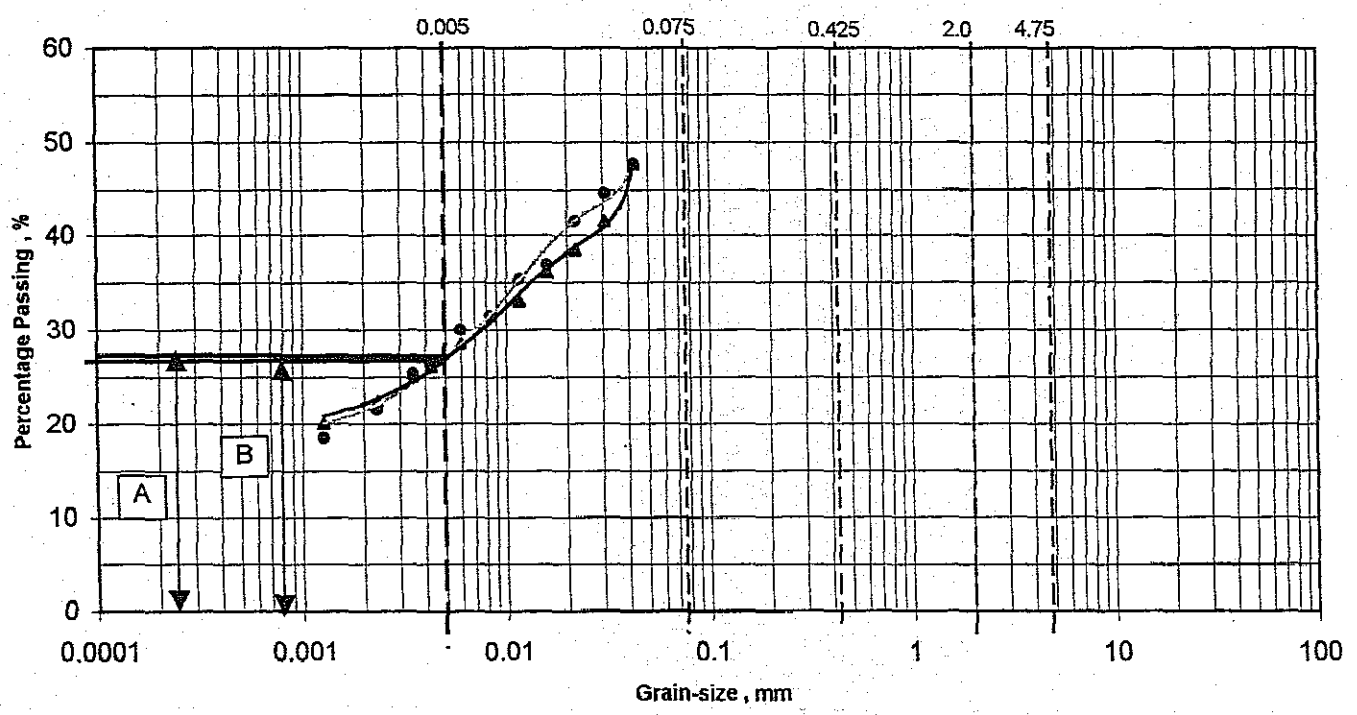
Sample No.: **Mix 2-8-1** Testing Date : 8-Jul-06

Depth :

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Comments

A= 27.8 %

B= 27.4 %

% Dispersion = **101.46**

Remark :

dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

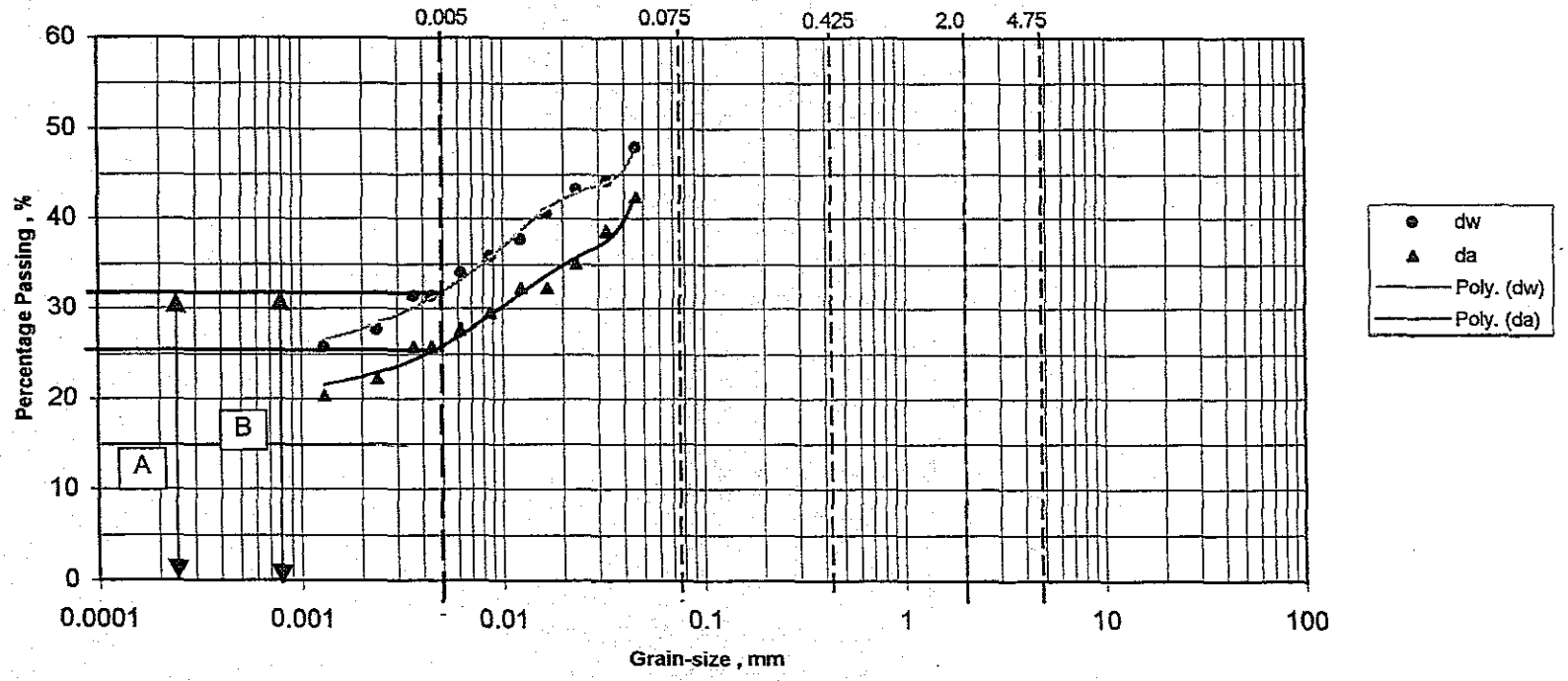
Sample No.: **Mix 2-8-2**
Depth :

Testing Date : *8-Jul-06*

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		SIEVE TEST				

Comments

A= 32.2 %

B= 26.5 %

% Dispersion = **121.51**

Remark :

dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

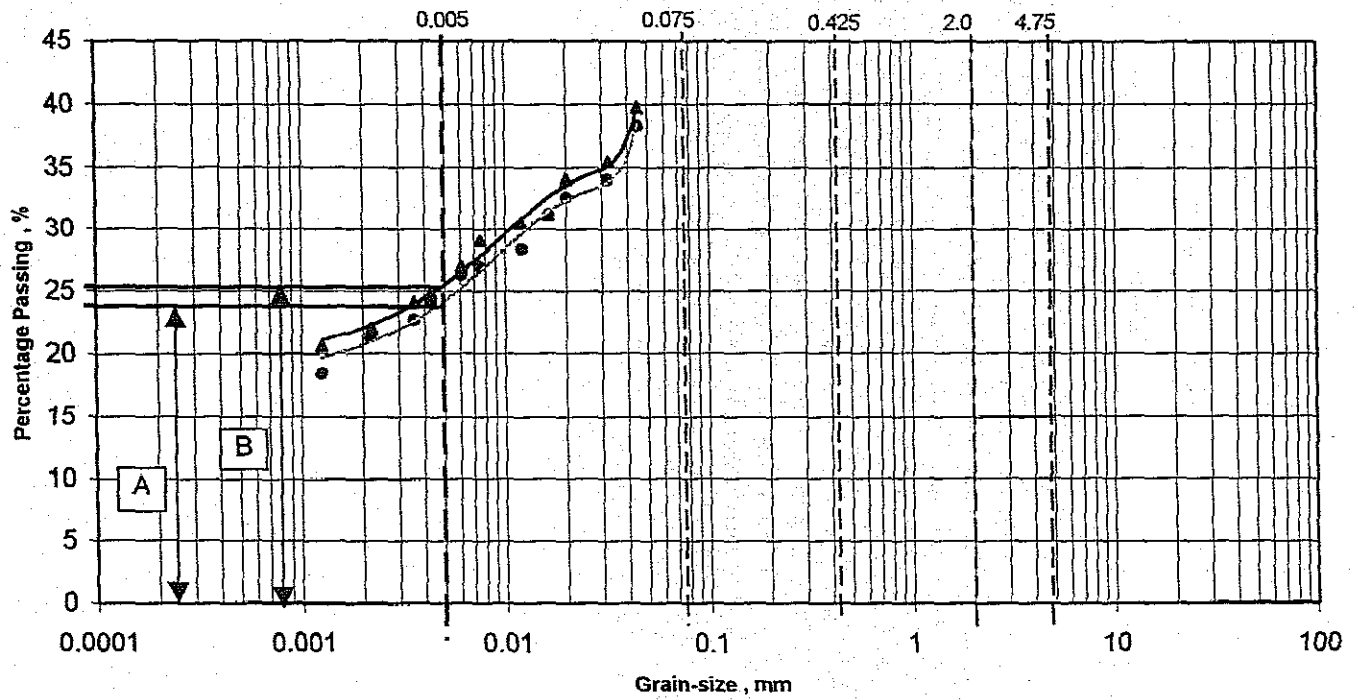
Sample No.: **Mix 2-8-3** Testing Date : 8-Jul-06

Depth :

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		**SIEVE TEST**				

Comments

A= 24 %

B= 25.5 %

% Dispersion = **94.12**

Remark :

dw - Specimen soaked in Distilled Water

da - Specimen soaked in Dispersing Agent

Ministry Of Water Resources and Meteorology
Engineering Department
Soil Quality Analysis Office

PROJECT: THE STUDY ON THE ROAD NETWORK DEVELOPMENT

HYDROMETER DISPERSIVITY TEST

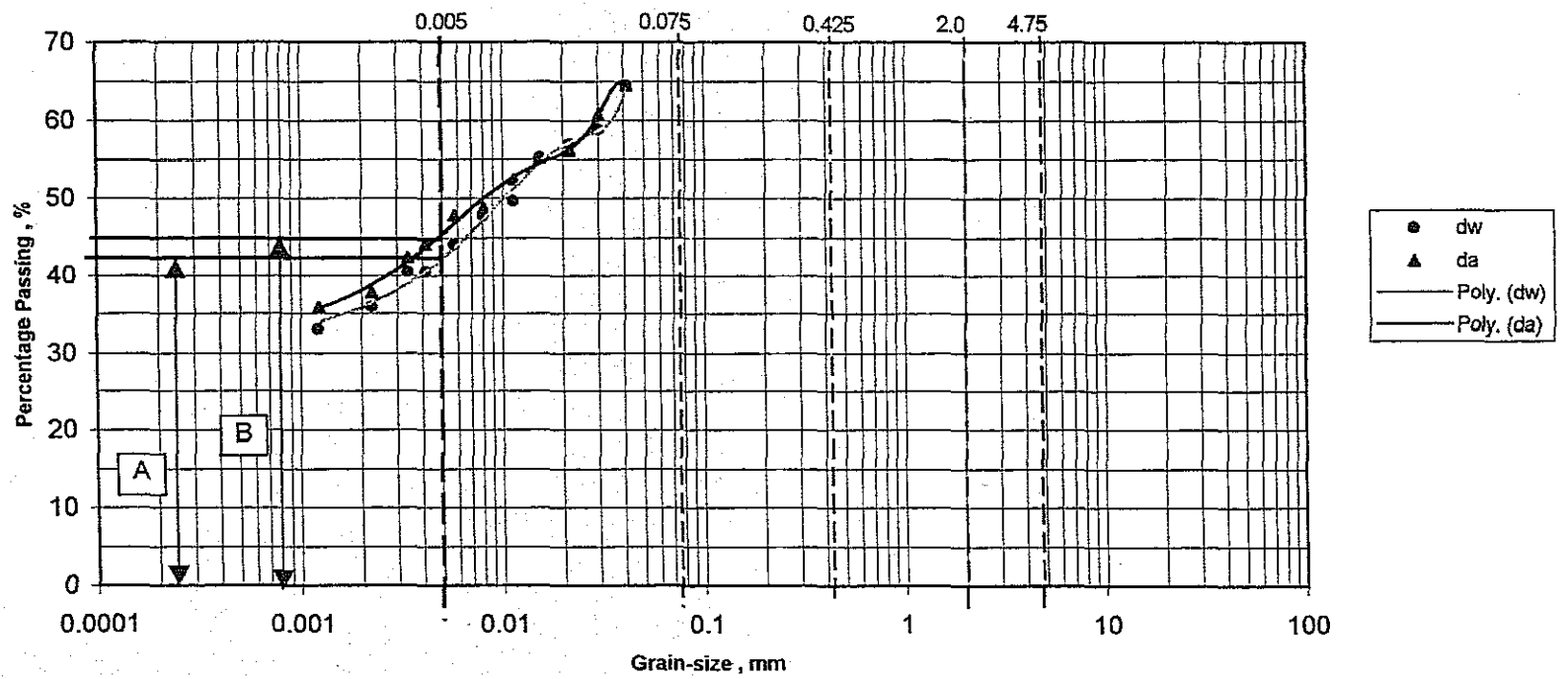
Sample No.: **Mix 2-8-4**
Depth :

Testing Date : 8-Jul-06

Checked by Ket Chansavuth

Tested by : Chou Sarem

PARTICLE SIZE DISTRIBUTION CURVE



CLAY	SILT	Fine	Medium	Coars.	GRAVEL	COBBLE
		SAND				
HYDROMETER TEST		SIEVE TEST				

Comments
A= 42.5 %
B= 45 %

% Dispersion = **94.44**

Remark :
dw - Specimen soaked in Distilled Water

da - Specimen soaked in *Dispersing Agent*

＜ピンホール試験結果＞

D4647
Pinhole Test Data

Sample No. Mix1-4 Date 10/07/2006

Density of Specimen D90% (1.719g/cm3)

Initial Water Content of Specimen 13.45% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	28	60	0.47			O					
2	5	29	120	0.48			O					
3	5	32	180	0.53			O					
4	5	32	240	0.53			O					
5	5	33	300	0.55			O					
6	5	34	360	0.57			O					
7	5	35	420	0.58			O					
8	5	36	480	0.60			O					
9	5	36	540	0.60			O					
10	5	36	600	0.60			O					
11	18	77	660	1.28			O					
12	18	82	720	1.37		O						
13	18	88	780	1.47		O						
14	18	95	840	1.58		O						
15	18	95	900	1.58		O						
16	38	170	960	2.83		O						
17	38	170	1020	2.83		O						
18	38	180	1080	3.00		O						
19	38	184	1140	3.07		O						
20	38	190	1200	3.17		O						Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	D2

D4647
Pinhole Test Data

Sample No. Mix1-5 Date 10/07/2006

Density of Specimen D90% (1.757g/cm3)

Initial Water Content of Specimen 12.15% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	30	60	0.50				O				
2	5	31	120	0.52				O				
3	5	30	180	0.50				O				
4	5	30	240	0.50				O				
5	5	30	300	0.50				O				
6	5	29	360	0.48				O				
7	5	29	420	0.48				O				
8	5	29	480	0.24				O				
9	5	29	540	0.48				O				
10	5	29	600	0.48				O				
11	18	45	660	0.75				O				
12	18	45	720	0.75				O				
13	18	45	780	0.75				O				
14	18	45	840	0.38				O				
15	18	45	900	0.75				O				
16	38	73	960	1.22				O				
17	38	75	1020	1.25				O				
18	38	80	1080	1.33				O				
19	38	91	1140	1.52				O				
20	38	94	1200	1.57				O				Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	D2

D4647
Pinhole Test Data

Sample No. Mix4-1 Date 11/07/2006

Density of Specimen D90% (1.639g/cm3)

Initial Water Content of Specimen 13.45% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	13	60	0.22					O			
2	5	13	120	0.22					O			
3	5	12	180	0.20					O			
4	5	12	240	0.20					O			
5	5	12	300	0.20						O		
6	5	11	360	0.18						O		
7	5	11	420	0.18						O		
8	5	11	480	0.18						O		
9	5	11	540	0.18						O		
10	5	11	600	0.18						O		
11	18	20	660	0.33						O		
12	18	21	720	0.35						O		
13	18	21	780	0.35						O		
14	18	21	840	0.35						O		
15	18	21	900	0.35						O		
16	38	33	960	0.55						O		
17	38	35	1020	0.58						O		
18	38	36	1080	0.60						O		
19	38	36	1140	0.60						O		
20	38	36	1200	0.60						O		Finish Test

remarks	Classification of Dispersivity
	ND1

D4647
Pinhole Test Data

Sample No. Mix4-2 Date 11/07/2006

Density of Specimen D90% (1.596g/cm3)

Initial Water Content of Specimen 18.17% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	11	60	0.18						O		
2	5	13	120	0.22						O		
3	5	12	180	0.20						O		
4	5	13	240	0.22						O		
5	5	14	300	0.23						O		
6	5	15	360	0.25						O		
7	5	15	420	0.25						O		
8	5	15	480	0.25						O		
9	5	15	540	0.25						O		
10	5	15	600	0.25						O		
11	18	37	660	0.62						O		
12	18	39	720	0.65						O		
13	18	40	780	0.67						O		
14	18	40	840	0.67						O		
15	18	41	900	0.68						O		
16	38	61	960	1.02						O		
17	38	62	1020	1.03						O		
18	38	62	1080	1.03						O		
19	38	63	1140	1.05						O		
20	38	63	1200	1.05						O		Finish Test

remarks	Classification of Dispersivity
	ND1

D4647
Pinhole Test Data

Sample No. Mix2-8-1 Date 11/07/2006

Density of Specimen D90% (1.627 g/cm3)

Initial Water Content of Specimen 12.36% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	14	60	0.23					O			
2	5	15	120	0.25					O			
3	5	15	180	0.25					O			
4	5	15	240	0.25					O			
5	5	15	300	0.25					O			
6	5	15	360	0.25					O			
7	5	15	420	0.25					O			
8	5	15	480	0.25					O			
9	5	14	540	0.23					O			
10	5	15	600	0.25					O			
11	18	43	660	0.72				O				
12	18	57	720	0.95				O				
13	18	66	780	1.10				O				
14	18	70	840	1.17				O				
15	18	82	900	1.37				O				
16	38	140	960	2.33			O					
17	38	165	1020	2.75			O					
18	38	170	1080	2.83			O					
19	38	178	1140	2.97			O					
20	38	180	1200	3.00			O					Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	D2

D4647
Pinhole Test Data

Sample No. Mix2-8-2 Date 11/07/2006

Density of Specimen D90% (1.681g/cm3)

Initial Water Content of Specimen 9.57% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	14	60	0.23					O			
2	5	15	120	0.25					O			
3	5	16	180	0.27					O			
4	5	20	240	0.33				O				
5	5	22	300	0.37				O				
6	5	25	360	0.42				O				
7	5	27	420	0.45				O				
8	5	30	480	0.50			O					
9	5	35	540	0.58			O					
10	5	38	600	0.63			O					
11	18	96	660	1.60			O					
12	18	115	720	1.92			O					
13	18	123	780	2.05			O					
14	18	125	840	2.08			O					
15	18	130	900	2.17			O					
16	38	190	960	3.17			O					
17	38	200	1020	3.33			O					
18	38	207	1080	3.45			O					
19	38	209	1140	3.48			O					
20	38	211	1200	3.52			O					Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	**D2**

D4647
Pinhole Test Data

Sample No. Mix2-8-3 Date 12/07/2006

Density of Specimen D90% (1.683g/cm3)

Initial Water Content of Specimen 11.22% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	10	60	0.17				O				
2	5	11	120	0.18				O				
3	5	11	180	0.18				O				
4	5	12	240	0.20				O				
5	5	13	300	0.22				O				
6	5	15	360	0.25				O				
7	5	16	420	0.27			O					
8	5	18	480	0.30			O					
9	5	20	540	0.33			O					
10	5	23	600	0.38			O					
11	18	90	660	1.50			O					
12	18	100	720	1.67			O					
13	18	125	780	2.08		O						
14	18	128	840	2.13		O						
15	18	138	900	2.30		O						
16	38	215	960	3.58		O						
17	38	220	1020	3.67		O						
18	38	224	1080	3.73		O						
19	38	230	1140	3.83		O						
20	38	235	1200	3.92		O						Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	**D2**

D4647
Pinhole Test Data

Sample No. Mix2-8-4 Date 12/07/2006

Density of Specimen D90% (1.618 g/cm3)

Initial Water Content of Specimen 12.15% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	14	60	0.23				O				
2	5	14	120	0.23				O				
3	5	15	180	0.25				O				
4	5	15	240	0.25				O				
5	5	15	300	0.25				O				
6	5	15	360	0.25				O				
7	5	15	420	0.25				O				
8	5	15	480	0.25				O				
9	5	16	540	0.27				O				
10	5	15	600	0.25				O				
11	18	20	660	0.33			O					
12	18	21	720	0.35			O					
13	18	21	780	0.35			O					
14	18	20	840	0.33			O					
15	18	21	900	0.35			O					
16	38	40	960	0.67			O					
17	38	42	1020	0.70			O					
18	38	42	1080	0.70			O					
19	38	43	1140	0.72			O					
20	38	44	1200	0.73			O					Finish Test

remarks	Classification of Dispersivity
after first 10min turbidity was not 'Clear'	D2

D4647
Pinhole Test Data

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

Density of Specimen D90% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	22	60	0.37						O		
2	5	23	120	0.38						O		
3	5	23	180	0.38						O		
4	5	23	240	0.38						O		
5	5	23	300	0.38						O		
6	5	24	360	0.40						O		
7	5	24	420	0.40						O		
8	5	24	480	0.40						O		
9	5	24	540	0.40						O		
10	5	25	600	0.42						O		
11	18	50	660	0.83						O		
12	18	50	720	0.83						O		
13	18	50	780	0.83						O		
14	18	50	840	0.83						O		
15	18	50	900	0.83						O		
16	38	80	960	1.33						O		
17	38	79	1020	1.32						O		
18	38	79	1080	1.32						O		
19	38	79	1140	1.32						O		
20	38	79	1200	1.32						O		Finish Test

remarks	Classification of Dispersivity
	ND1

D4647
Pinhole Test Data

Sample No. 1-4 Date 03/07/2006

Density of Specimen D90% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
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 D90% (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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
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

D4647
Pinhole Test Data

Sample No. 1-2 Date 06/07/2006

Density of Specimen D85% (1.483 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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	21	60	0.35						O		
2	5	22	120	0.37						O		
3	5	22	180	0.37						O		
4	5	22	240	0.37						O		
5	5	22	300	0.37						O		
6	5	22	360	0.37						O		
7	5	22	420	0.37						O		
8	5	22	480	0.37						O		
9	5	22	540	0.37						O		
10	5	22	600	0.37						O		
11	18	49	660	0.82						O		
12	18	50	720	0.83						O		
13	18	50	780	0.83						O		
14	18	50	840	0.83						O		
15	18	50	900	0.83						O		
16	38	78	960	1.30						O		
17	38	80	1020	1.33						O		
18	38	76	1080	1.27						O		
19	38	78	1140	1.30						O		
20	38	78	1200	1.30						O		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 (ml)	Flow (sec)	Flow Rate (ml/s)	Turbidity from side: Very Dark	Dark	Moderately Dark	Slightly Dark	Barely Visible	Completely Clear	Completely Clear from top	Remarks
1	5	15	60	0.25						O		
2	5	15	120	0.25						O		
3	5	15	180	0.25						O		
4	5	15	240	0.25						O		
5	5	16	300	0.27						O		
6	5	15	360	0.25						O		
7	5	15	420	0.25						O		
8	5	16	480	0.13						O		
9	5	17	540	0.28						O		
10	5	17	600	0.28						O		
11	18	40	660	0.67						O		
12	18	42	720	0.70						O		
13	18	43	780	0.72						O		
14	18	44	840	0.37						O		
15	18	44	900	0.73						O		
16	38	80	960	1.33						O		
17	38	81	1020	1.35						O		
18	38	81	1080	1.35						O		
19	38	81	1140	1.35						O		
20	38	82	1200	1.37						O		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: 13 July 2006

No.	Sample Code	Unit	Calcium Ca	Potassium K	Sodium Na	Magnesium Mg
1	Mix.1-4	mg/kg-dry	27.20	266.83	453.97	61.15
2	Mix.1-5	mg/kg-dry	48.51	243.00	417.76	60.32
3	Mix.4-1	mg/kg-dry	37.85	425.58	435.87	80.08
4	Mix.4-2	mg/kg-dry	21.87	473.97	331.59	74.32
5	Mix.2-8-1	mg/kg-dry	37.85	263.90	571.99	75.69
6	Mix.2-8-2	mg/kg-dry	32.52	78.02	576.36	67.18
7	Mix.2-8-3	mg/kg-dry	32.52	200.84	581.98	55.93
8	Mix.2-8-4	mg/kg-dry	27.20	160.51	568.86	67.73

Director

Heng Nareth

Lab-Manager

Ty Sotheavun

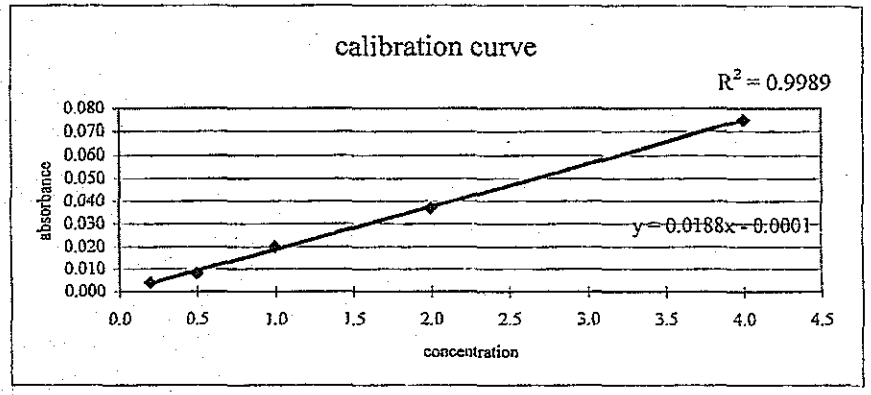
Calcium(Ca) in Soil

N	Conc. mg/L	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS
B	BLANK	0.000			0.000	
1	0.2	0.004			0.004	0.004
2	0.5	0.008			0.008	0.008
3	1.0	0.020			0.020	0.020
4	2.0	0.037			0.037	0.037
5	4.0	0.075			0.075	0.075
6						

correlation coefficient: R = 0.9994387
Conc.=A * ABS + B

A(Slope)	B(Intercept)
53.2761	0.0056

Ca



Volume after pretreatment	50 mL
Optimum Concentration Range: 0.2 - 10 mg/L	

Sample point No.		Date of taking sample	Time of taking sample	Soil weight for analys. (g-dry)	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS ($ABS-A_B$)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
B	BLANK (A_B)	-	-		0.000			0.000	-	-	-	-	-
1	Mix. 1-4			0.5	0.005			0.005	0.005	0.272	1	0.01360	27.198
2	Mix. 1-5			0.5	0.009			0.009	0.009	0.485	1	0.02425	48.508
3	Mix. 4-1			0.5	0.007			0.007	0.007	0.379	1	0.01893	37.853
4	Mix. 4-2			0.5	0.004			0.004	0.004	0.219	1	0.01094	21.870
5	Mix. 2-8-1			0.5	0.007			0.007	0.007	0.379	1	0.01893	37.853
6	Mix. 2-8-2			0.5	0.006			0.006	0.006	0.325	1	0.01626	32.526
7	Mix. 2-8-3			0.5	0.006			0.006	0.006	0.325	1	0.01626	32.526
8	Mix. 2-8-4			0.5	0.005			0.005	0.005	0.272	1	0.01360	27.198
								#DIV/0!	#DIV/0!	#DIV/0!	1	#DIV/0!	#DIV/0!
								#DIV/0!	#DIV/0!	#DIV/0!	1	#DIV/0!	#DIV/0!
								#DIV/0!	#DIV/0!	#DIV/0!	1	#DIV/0!	#DIV/0!

Date of analysis :	13/07/2006	Name of analyst :	Chhek Rath
Time of analysis :	3:30		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____

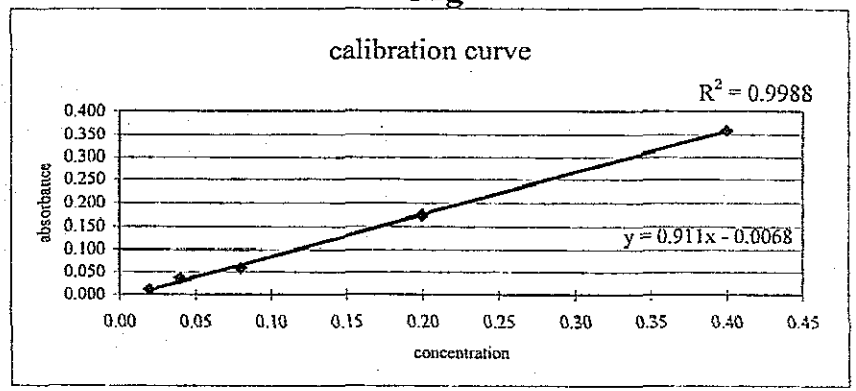
Head of Laboratory _____

14052003 Chhek Roth

Magnesium(Mg) in Soil

N	Conc. mg/L	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS
B	BLANK	0.009			0.009	
1	0.02	0.021			0.021	0.012
2	0.04	0.045			0.045	0.036
3	0.1	0.068			0.068	0.059
4	0.2	0.183			0.183	0.174
5	0.4	0.368			0.368	0.359
6						

Mg



correlation coefficient: R = 0.999422723
Conc.=A * ABS + B

A(Slope)	B(Intercept)
1.0977	0.0075

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 1	ABS 2	ABS 3	average ABS	corrected ABS ($ABS-A_B$)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
B	**BLANK (A_B)**	-	-		0.009			0.009	-	-	-	-	-
1	Mix. 1-4			1.000	0.225			0.225	0.216	0.2446	5	0.0612	61.1508
2	Mix. 1-5			1.000	0.222			0.222	0.213	0.24131	5	0.0603	60.3275
3	Mix. 4-1			1.000	0.294			0.294	0.285	0.32034	5	0.0801	80.0861
4	Mix. 4-2			1.000	0.273			0.273	0.264	0.29729	5	0.0743	74.3232
5	Mix. 2-8-1			1.000	0.278			0.278	0.269	0.30278	5	0.0757	75.6953
6	Mix. 2-8-2			1.000	0.247			0.247	0.238	0.26875	5	0.0672	67.1882
7	Mix. 2-8-3			1.000	0.206			0.206	0.197	0.22375	5	0.0559	55.9367
8	Mix. 2-8-4			1.000	0.249			0.249	0.240	0.27095	5	0.0677	67.7370
				1.000				#DIV/0!	#DIV/0!	#DIV/0!	5	#DIV/0!	#DIV/0!
				1.000				#DIV/0!	#DIV/0!	#DIV/0!	5	#DIV/0!	#DIV/0!
				1.000				#DIV/0!	#DIV/0!	#DIV/0!	5	#DIV/0!	#DIV/0!

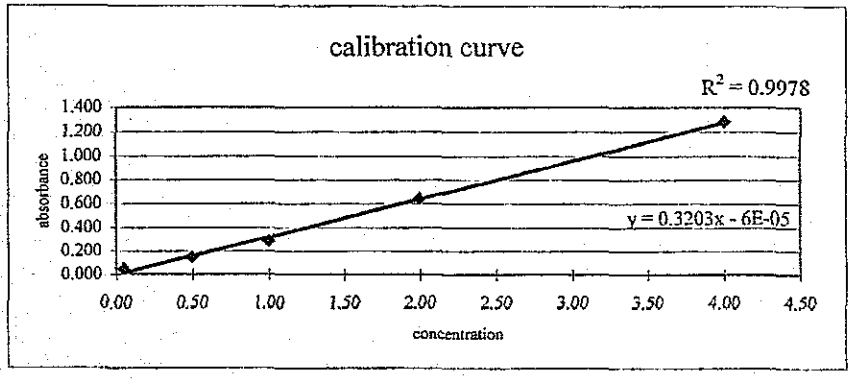
Date of analysis :	13/07/2006	Name of analyst :	Chhek Rath
Time of analysis :	3:30		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____

Head of Laboratory _____

Sodium(Na) in Soil

N	Conc. mg/L	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS
B	BLANK	0.009			0.009	
1	0.05	0.056			0.056	0.047
2	0.5	0.158			0.158	0.149
3	1.0	0.297			0.297	0.288
4	2.0	0.656			0.656	0.647
5	4.0	1.296			1.296	1.287



correlation coefficient: R = 0.9989124
Conc.=A * ABS + B

A(Slope)	B(Intercept)
3.122	0.0002

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 1	ABS 2	ABS 3	average ABS	corrected ABS ($ABS-A_B$)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
B	BLANK (A_B)	-	-		0.009			0.009	-	-	-	-	-
1	Mix. 1-4			0.5	0.736			0.736	0.727	2.2699	2	0.2270	453.9788
2	Mix. 1-5			0.5	0.678			0.678	0.669	2.0888	2	0.2089	417.7636
3	Mix. 4-1			0.5	0.707			0.707	0.698	2.1794	2	0.2179	435.8712
4	Mix. 4-2			0.5	0.540			0.540	0.531	1.6580	2	0.1658	331.5964
5	Mix. 2-8-1			0.5	0.925			0.925	0.916	2.8600	2	0.2860	571.9904
6	Mix. 2-8-2			0.5	0.932			0.932	0.923	2.8818	2	0.2882	576.3612
7	Mix. 2-8-3			0.5	0.941			0.941	0.932	2.9099	2	0.2910	581.9808
8	Mix. 2-8-4			0.5	0.920			0.920	0.911	2.8443	2	0.2844	568.8684
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								#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!

Date of analysis :	13/07/2006	Name of analyst :	Chhek Rath
Time of analysis :	3:30		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____

Head of Laboratory _____

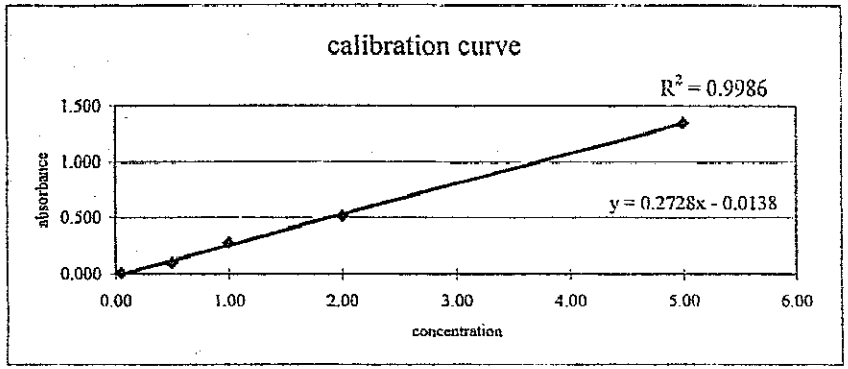
Potassium(K) in Soil

N	Conc. mg/L	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS
B	BLANK	0.011			0.011	
1	0.05	0.021			0.021	0.010
2	0.5	0.111			0.111	0.100
3	1.0	0.296			0.296	0.285
4	2.0	0.525			0.525	0.514
5	5.0	1.365			1.365	1.354

correlation coefficient: R = 0.9993037
Conc.=A * ABS + B

A(Slope)	B(Intercept)
3.6662	0.0507

K



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

Sample point No.		Date of taking sample	Time of taking sample	Soil weight for analys. (g-dry)	ABS 1	ABS 2	ABS 3	average ABS	corrected ABS ($ABS-A_B$)	Conc. mg/L	dilution times	Metal weight (mg)	Conc. mg/kg-dry
B	BLANK (A_B)	-	-		0.011			0.011	-	-	-	-	-
1	Mix. 1-4			0.5	0.725			0.725	0.714	2.6684	1	0.1334	266.83668
2	Mix. 1-5			0.5	0.660			0.660	0.649	2.4301	1	0.1215	243.00638
3	Mix. 4-1			0.5	1.158			1.158	1.147	4.2558	1	0.2128	425.58314
4	Mix. 4-2			0.5	1.290			1.290	1.279	4.7398	1	0.2370	473.97698
5	Mix. 2-8-1			0.5	0.717			0.717	0.706	2.6390	1	0.1320	263.90372
6	Mix. 2-8-2			0.5	0.210			0.210	0.199	0.7803	1	0.0390	78.02738
7	Mix. 2-8-3			0.5	0.545			0.545	0.534	2.0085	1	0.1004	200.84508
8	Mix. 2-8-4			0.5	0.435			0.435	0.424	1.6052	1	0.0803	160.51688
								#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!	#DIV/0!
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Date of analysis :	13/07/2006	Name of analyst :	Chhek Rath
Time of analysis :	3:30		
Method :	Flame Atomic Absorption Spectrometry		

Work checked by _____
Head of Laboratory _____