

Civil Engineering, BUET
Engineering Laboratory
TER ANALYSIS

Test No.: 23/10/21
Date: 23/10/21

Tested by: Hydrometer No. 152/H867452

Meniscus Correction:

W_s , in g 50

Location: _____

Boring No.: 102 Sample No. D-4,5

Sample Depth: 6.0, 7.5 M

Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/10	4 44	-3	28								
	5 39				"						
	1 29				"						
	2 21				"						
	4 15				"						
	8 11				"						
	15 8.5				"						
	30 7				"						
10:18	60 6				"						
11:18	120 4.5				"						
1:18	240 3.5				"						
5:18	480 3				"						
25/10	8:51 Am	3			29						
25/10	9:00 Am	3			29						
26/10	9:00	"	3		"						

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

SI-394

Sieve Analysis

Job No.:

Container: 1194 / 1019

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 102

Wt. of Soil 100 gm

Sample No.: D-4, 5

Performed by: _____

Sample depth: _____

Date: 23/10/21

$$D_{10} =$$

$$D_{30} =$$

$$D_{60} =$$

$C_H =$

$C_7 =$

F.M. =

SI - 394

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____
Date: 23/10/21

Location: _____

Tested by: _____

Boring No. : 102 Sample Depth. _____Sample No. : D - 4,5

Determination No.				
Bottle No.		20		
Wt. of Bottle + Water + Soil W_1 in g		373.6		
Temperature T in °C		28		
Wt. of Bottle + Water W_2 in g		342.0		
Evaporating Dish No.		23		
Wt. of dish g		323.7		
Wt. of dish + dry soil g		373.2		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		94.0		
Wt. of Soil W_s in g		49.5		
Specific Gravity of Water G_T at T°C				
Specific Gravity of Soil: Gs				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ Gs _____

88-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Cont No: 1194

Atterberg Limit Test

Soil Sample _____

Test No.: _____

BH : 102

Date: 2021

Sample: D - 4,5

Tested by:

Depth : 3, 4, 5 M

Liquid Limit					
No. of Blows					
Container No.	2181	2125	2104	2185	2152
Wt. Container, gm	10.23	9.70	9.83	8.96	10.16
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	888	825	2332		
Wt. Container, gm	11.18	7.02	9.09		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL=394
Soil Sample: Mithamain

Test No.: _____

Date: 19/6/21

Tested by: _____

Hydrometer No. 152 H 867452

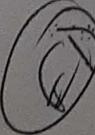
Meniscus Correction: _____

W_s in g 50.0 gm

Location: _____

Boring No.: 103 Sample No. UD-2Sample Depth: 8.10 - 8.55 MSpecific Gravity, G_s: _____*1386**RR=1*

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
20/6	1/4	43	-4	28							
	1/2	37		27							
	1	33.5		"							
	2	29		"							
	4	24.5		"							
	8	20		"							
	15	16		"							
	30	13		"							
10:16	60	10.5		27							
11:16	120	8.5		28							
1:16	240	7		"							
5:16	480	6		"							
21/6	9:01 Am	5		27							
22/6	9:19 Am	3.5		"							
23/6	9:12 Am	3.0		28							



Mithamoin

SL-394

Review analysis

Job No.: _____

Container 1386 / 1301

Soil Sample _____

Wt. of Container + Soil : _____

Location: _____

Wt. of Container _____

Boring No: 103

Wt. of Soil 100.0 gm

Sample No. : UD-2

Performed by: _____

Sample depth: 8.10 - 8.55 M

Date: 17/06/21

D₁₀

D₃₀ =

D₆₀ =

$$C_1 =$$

C

F.M.

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 20/06/21

Tested by: _____

Location: _____

Boring No.: 109 Sample Depth. _____Sample No.: UD-2

Determination No.				
Bottle No.		12		
Wt. of Bottle + Water + Soil W_1 in g		375.3		
Temperature T in °C		27		
Wt. of Bottle + Water W_2 in g		343.9		
Evaporating Dish No.		8		
Wt. of dish	g	165.7		
Wt. of dish + dry soil	g	215.2		
Wt. Bottle + Dry Soil in	g			
Wt. of Bottle in	g	96.0		
Wt. of Soil W_s in	g	49.5		
Specific Gravity of Water G_T at $T^{\circ}\text{C}$				
Specific Gravity of Soil: G_s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2} \quad G_s \quad \dots$

Atterberg Limit Test

Soil Sample _____

D. H 103

Sample : UD-2

Depth : 8.10 - 8.55 M

Test No.: _____

Date: _____

Tested by: _____

Liquid Limit					
No. of Blows					
Container No.	2172	2204	2034	2073	2258
Wt. Container, gm	9.92	10.70	9.41	10.30	10.84
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2171	2135	2081		
Wt. Container, gm	9.95	9.17	9.63		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



SURVEY 2000 L+H - 669

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain

Sadar to Karimganj Upazilla

Client: BBA

Location: Mithamain, Kishoreganj

Civil Engineering, BUET

Engineering Laboratory

TESTER ANALYSIS

Bore Hole No: 104

Depth: 1.50 m

Sample type: D-1

Signature: Aminur

Test No.: _____

Date: 22/8/21

Tested by: _____

Hydrometer No. 152H 867452

Meniscus Correction: _____

W_s, in g 50.0 gm

Location: _____

Boring No.: 104 Sample No. D-1, 2, 3

Sample Depth: 1.5, 3.0, 4.5 m

Specific Gravity, G_s _____

Rx = 2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/8	14 45	45	-3	29							
	12 41										
	1 34										
	2 27										
	24 22										
	8 17										
	15 12.5										
	30 10.5										
10:07	60	8.5			11						
11:07	120	7.5			11						
1:07	240	6.5			4						
5:07	480	5.5			1						
24/8	9:02	An	4.5		29						
25/8	9:10	An	3.5		29						
26/8	9:01	An	3.5		29						

Structural Engineering Laboratory
Department of Civil Engineering, BUET

Sieve Analysis

51-394

Job No.: _____

Container: 669/869

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container _____

Boeing No: 104

Wt. of Soil 100.0 g

Sample No.: D-1, 2, 3

Performed by: _____

Sample depth: _____

Date: 22/08/21

$D_{IC} =$

$$D_{30} =$$

$$D_{60} =$$

$C_1 =$

5

FM =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 22/08/21

Tested by: _____

Location: _____

Boring No.: 104 Sample Depth. _____Sample No.: D-1, 2, 3

Determination No.				
Bottle No.		8		
Wt. of Bottle + Water + Soil W_1 in g		372.7		
Temperature T in °C		29		
Wt. of Bottle + Water W_2 in g		341.2		
Evaporating Dish No.		13		
Wt. of dish g		148.7		
Wt. of dish + dry soil g		198.7		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		92.7		
Wt. of Soil W_s in g		50.0		
Specific Gravity of Water G_T at T°C				
Specific Gravity of Soil: G_s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

Cont: 669

S.J. 394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

B.H : 104

Sample : D-1, 2, 3

Depth : 1.5, 3.0, 4.5 M

Test No.: _____

Date: 14/08/2021

Tested by: _____

Liquid Limit					
No. of Blows	15	21	25	29	34
Container No.	2149	2062	2303	2065	2267
Wt. Container, gm	8.99	9.15	10.56	9.65	10.65
Wt. Container + Wet Soil	43.10	42.77	45.46	41.14	42.00
Wt. Container + Dry Soil	33.51	33.43	35.73	32.60	33.70
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	4	2284	2098
Wt. Container, gm	6.98	9.74	9.77
Wt. Container + Wet Soil	50.91	58.70	55.62
Wt. Container + Dry Soil	41.77	48.47	46.08
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY 2000
 SAMPLE TICKET L+H - 687
 Project: Elevated Expressway/Road from Mithamain
 Sadar to Karimganj Upazilla
 Client: BBA
 Location: Mithamain, Kishoreganj

Bore Hole No: 106
Depth: 46.5 m

Sample type: D-31
Signature: Aminur

Civil Engineering, BUET
Engineering Laboratory

TESTER ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H 867452

Meniscus Correction: _____

W_s , in g 50 gm

687

Location: _____

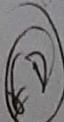
Boring No.: 106 Sample No. D-31, 32, 33

Sample Depth: 46.5, 48, 49.5 m

Specific Gravity, G_s _____

$Rr = 2$

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
26/8	1/4	46	-3	29							
	1/2	42			"						
	1	35.5			"						
	2	30			"						
	4	26			"						
	8	22			"						
	15	19.5			"						
	30	17			"						
27/8	10:40	60	15		29						
27/8	11:40	120	13		29						
27/8	1:40	240	11.5		"						
		480			"						
28/8	9:50	An	8		"						
28/8	9:04	An	7.5		29						
29/8	9:01	An	7.5		29						



**Civil Engineering Laboratory
Department of Civil Engineering, BUET**

81-394

Steve Ratner

Job No.: _____

Container: 687 / 1110

Soil-Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 106

Wt. of Soil 100.0 gm.

Sample No.: D-31, 32,

Performed by:

Sample depth:

Date: 24/8/21

Dig. 5

$$D_{10} =$$

$$D_{60} =$$

$$C_0 =$$

$C =$

EM

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 24/08/21

Tested by: _____

Location: _____

Boring No. : 106 Sample Depth. _____Sample No. : D-31, 32, 33

*4
687*

Determination No.				
Bottle No.		10		
Wt. of Bottle + Water + Soil W ₁ in g		373.3		
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		342.2		
Evaporating Dish No.		25		
Wt. of dish g		283.4		
Wt. of dish + dry soil g		333.1		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		93.6		
Wt. of Soil W _s in g		49.7		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

cont No = 687

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H.S 106

~~Depth~~ 46.5, 48, 49.5

Sample: D-31, 32, 33

Test No.:

Date: 14/8/21

Tested by:

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2192	2347	2315	2183	007
Wt. Container, gm	9.69	9.74	8.87	10.20	7.22
Wt. Container + Wet Soil	49.20	45.62	46.58	46.77	43.93
Wt. Container + Dry Soil	37.75	35.41	36.03	36.65	33.94
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
silty
clay

Plastic Limit			
Container No.	2154	2195	850
Wt. Container, gm	9.19	10.31	6.99
Wt. Container + Wet Soil	46.17	48.62	40.20
Wt. Container + Dry Soil	39.25	41.46	34.02
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



RECEIPT
from Mitbamain
Korimganj Upazilla
Client: BBA
Mitbamain, Kishoreganj

Rec: 25. cm
Sample type: D-32
Signature: Amin

607
from Mitbamain
azilla

Kishoreganj

Civil Engineering, BUET

Engineering Laboratory

TEST ANALYSIS

Test No.:

Date: 22/8/21

Tested by:

Hydrometer No. 1524867452

Meniscus Correction:

W_s , in g 50.0 gm

Location:

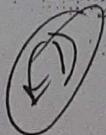
Boring No.: III Sample No. D-32, 33

Sample Depth: 48.0, 49.5 M

Specific Gravity, G_s

R = 2

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z}{t}} \text{ in cm}$	D in mm	N
23/8	1/4	47	-3	29							
	1/2	43.5			"						
	1	39			"						
	2	36			"						
	4	32			"						
	8	28			"						
	15	25.5			"						
	30	23.5		29							
	10:11	60	21		"						
	11:11	120	19		"						
	1:11	240	17		"						
	5:11	480	14.5		"						
24/8	9:02	An	13	29							
25/8	9:10	An	11.5	29							
26/8	9:01	An	11	29							



5L-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BJPU

Steve Aulysis

Job No.: _____

Container: 604/0909

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 111

Wt. of Soil 100.0 gm

Sample No.: D-32, 33

Performed by: _____

Sample depth: 48.0, 49.5 m

Date: 22/08/21

D_{1G} =

$$D_{30} =$$

$$D_{60} =$$

$$C_{\parallel} =$$

$C_2 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

H 394
Soil Sample: _____

Test No.: _____
Date: 22/08/21

Tested by: _____

Location: _____

Boring No.: 111 Sample Depth. _____

Sample No.: D - 32, 33

Determination No.				
Bottle No.		15		
Wt. of Bottle + Water + Soil W_1 in g		379.9		
Temperature T in °C		29		
Wt. of Bottle + Water W_2 in g		349.0		
Evaporating Dish No.		7		
Wt. of dish g		139.1		
Wt. of dish + dry soil g		188.5		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		100.8		
Wt. of Soil W_s in g		49.4		
Specific Gravity of Water G_T at T°C				
Specific Gravity of Soil: G_s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

Cont: 607

ST-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.I.L: 111

Date: 14/08/2028

Sample: D-32, 33

Tested by: _____

Depth: 48.0, 49.5 M

Liquid Limit					
No. of Blows	16	21	25	30	35
Container No.	2245	2134	2278	2217	2146
Wt. Container, gm	9.92	10.38	9.12	10.25	9.65
Wt. Container + Wet Soil	45.87	46.19	46.06	46.64	41.90
Wt. Container + Dry Soil	32.63	33.07	32.77	33.59	30.55
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Grey
silty
clay

Plastic Limit			
Container No.	2017	2067	878
Wt. Container, gm	9.84	8.86	10.96
Wt. Container + Wet Soil	55.71	54.90	55.04
Wt. Container + Dry Soil	46.81	45.92	46.50
Wt. Water, W _w in gm			
Wt. Dry sol, W _s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: 24/5/21

Tested by: _____

Hydrometer No. 152H 867452

Meniscus Correction: _____

W_s in g 50.0 gm

Location: _____

Boring No.: 113 Sample No. UD-3Sample Depth: 32.10M to 32.55MSpecific Gravity, G_s _____R_{r21}

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/5	1/4	49	-4	31							
	1/2	47			4						
	1	44			4						
	2	37			4						
	4	30			4						
	8	23			4						
	15	19			4						
	30	14			4						
10:40	60	11			11						
11:40	120	9.5			11						
1:40	240	7.5			11						
5:40	480	5.5			31.5						
24/5	9:04Am	4.5			31						
25/5	9:10Am	4.5			30.5						
26/5	9:12Am	4.5			30						

Linear Analysis

51V 394

Job No.:

Soil Sample

Location:

Boring No: 113

Sample No. : UD-3

Sample depth: 32.10 M to 32.55 M

Container

Wt. of Container + Soil

Wt. of Container:

Wt. of Soil

performed by:

5.0

D₁₀ =

$$D_{10} =$$

$$D_{60} =$$

$$C_{11} =$$

$C_2 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 22/05/21

Tested by: _____

Location: _____

Boring No.: 113 Sample Depth: _____Sample No.: UD-3

Determination No.			
Bottle No.		9	
Wt. of Bottle + Water + Soil W ₁ in g		372.2	
Temperature T in °C		31	
Wt. of Bottle + Water W ₂ in g		340.4	
Evaporating Dish No.		23	
Wt. of dish g		323.5	
Wt. of dish + dry soil g		373.4	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		92.0	
Wt. of Soil W _s in g		49.9	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2} \quad G_s$$

cont No = 1292

61330A

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

P.H. 1113

Sample : UD - 3

Depth : 32.10 - 32.55 m

Test No.:

Date: 19/5/21

Tested by:

Liquid Limit					
No. of Blows					
Container No.	9146	9347	2149	2258	2071
Wt. Container, gm	9.63	9.73	8.98	10.90	9.50
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Plastic Limit					
Container No.					
Container No.	9045	9087	2217		
Wt. Container, gm	10.37	11.31	10.25		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SURVEY 2000
SAMPLE TICKET

LTH-653

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Bore Hole No: 114
Depth: 45.0 m

Sample type: D-30
Signature: Aminur

Civil Engineering, BUET

Engineering Laboratory

TEST ANALYSIS

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H 867452

Meniscus Correction: _____

W_s , in g 50 gm

Location: _____

Boring No.: 114 Sample No. D-30, 31, 32

Sample Depth: 45.0, 46.5, 48.0 M

Specific Gravity, G_s _____

$R_h = 2$

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R \cdot R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
26/8	Y1	45	-3	29							
	Y2	40.5		1							
	1	36		11							
	2	31		1							
	4	27		11							
	8	24		1							
	15	21		1							
	30	18		29							
10:32	60	16		1							
11:32	120	14		29							
1:32	240	12.5		29							
5:32	480	10.5		11							
27/8	9:49 AM	9		11							
28/8	9:03	A-	8.5	29							
29/8	9:00	A-	8.5	29							

SL-394

Micro analysis

Job No.: _____

Container: 89-875

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 114

Wt. of Soil 100.0 g/m³

Sample No. : D-30, 31, 32

Performed by _____

Sample depth: _____

Date: 24/8/21

D_{1c} =

$$D_{10} =$$

$$D_{60} =$$

$C_{\alpha} =$

$C_1 =$

E.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 24/08/21

Tested by: _____

Location: _____

Boring No.: 114 Sample Depth. _____Sample No.: D-30, 31, 32

Determination No.			
Bottle No.		2	
Wt. of Bottle + Water + Soil W ₁ in g		370.9	
Temperature T in °C		29	
Wt. of Bottle + Water W ₂ in g		370.9 340.0	
Evaporating Dish No.		21	
Wt. of dish g		302.3	
Wt. of dish + dry soil g		351.7	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		91.7	
Wt. of Soil W _s in g		49.4	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2}$$
 G_s _____

Cont: 653

S-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H : 114

Date: 14/08/2021

Sample : D - 30, 31, 32

Tested by:

Depth : 45.0, 46.5, 48.0 M

Liquid Limit					
No. of Blows	16	20	26	30	35
Container No.	2085	2126	2169	2226	2118
Wt. Container, gm	10.53	8.64	9.72	9.99	9.28
Wt. Container + Wet Soil	49.08	41.49	44.62	46.82	43.61
Wt. Container + Dry Soil	37.84	32.05	34.77	36.50	34.14
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
silty
loamy

Plastic Limit			
Container No.	2321	2086	2127
Wt. Container, gm	10.10	11.00	9.96
Wt. Container + Wet Soil	51.78	55.20	57.00
Wt. Container + Dry Soil	44.42	47.43	48.76
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SD-394

Department of Civil Engineering, BUET

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____
Date: 28/08/2021

Location: _____

Tested by: _____
Hydrometer No. 152/H/867452

Boring No.: 118 Sample No. D-32, 33

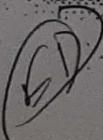
Meniscus Correction: _____
W_s in g 50

Sample Depth: 48.0, 49.5 M

Specific Gravity, G_s _____

R_r²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
29/8	X	45	-3	29							
	X	41			"						
	1	32			"						
	2	26.0			"						
	4	24			"						
	8	22			"						
	15	20			"						
	30	17			"						
10:28	60	4.15		29							
11:28	120	12.5		"							
1:28	240	11		"							
5:28	480	9.8		"							
30/8	9:26 Am	7.5		29							
31/8	8:56 Am	7.5		29							
01/9	9:33 Am	7		29							



85 394

Review of analysis

Job No.: _____

Container: 1338|092

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 118

Wt. of Soil 100.0 gm

Sample No.: D-32, 33

Performed by:

Sample depth: _____

Date: 28/8/21

D₁₀ 6

$$D_{30} =$$

D₆₀ =

$C_{\text{II}} =$

C₇ =

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
_____Test No.: _____
Date: 28/8/21

Tested by: _____

Location: _____

Boring No.: 118 Sample Depth. _____Sample No.: D-32, 33

Gray

Determination No.				
Bottle No.		13		
Wt. of Bottle + Water + Soil W ₁ in g		396.6		
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		365.2		
Evaporating Dish No.		25		
Wt. of dish g		283.4		
Wt. of dish + dry soil g		332.9		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		117.1		
Wt. of Soil W _s in g		49.5		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _S				

$$\text{Remarks } \frac{G_T W_s}{W_s - W_1 + W_2}$$

$$G_S \underline{\hspace{1cm}}$$

8.394

Muthamain

Contd: 1358

Governmett Engineering College
Department of Civil Engineering & Architecture

Atterberg Limit Test

Soil Sample _____

Test No. _____

6.H / 118

Date: ~~15/08/2018~~ 25/08/2018

Sample: D-32, 33

Tested by:

Depth: 48, 49.5 M

No. of Blows	Liquid Limit				
	16	21	25	30	35
Container No.	2226	2062	2303	2183	2065
Wt. Container, gm	10.00	9.11	10.51	10.18	9.63
Wt. Container + Wet Soil	43.90	46.55	43.91	42.33	43.09
Wt. Container + Dry Soil	33.65	35.46	34.10	33.15	33.71
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Gravely
billy
Clay

L+H

Container No.	Plastic Limit		
	2063	2134	2192
Wt. Container, gm	9.31	10.38	9.67
Wt. Container + Wet Soil	50.40	54.62	56.50
Wt. Container + Dry Soil	43.14	46.78	47.75
Wt. Water, W_w in gm			
Wt. Dry soil, W_d in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No. =

Wt. displaced mercury =

Wt. of Dish =

Volume of displaced mercury =

Wt. Dish + Wet Soil =

Vol. of dish =

Wt. Dish + Dry Soil =

Volume of dry soil pat =

Wt. Dry Soil Pat =

Shrinkage Limit =

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B, Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SI-394

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Location: _____

Date: _____

Boring No.: 119 Sample No. D - 2, 3

Hydrometer No. 152 H 867952

Sample Depth: 3.0, 4 M

Meniscus Correction: _____

Specific Gravity, G_s: _____W_s in g 50

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
27/4	46	46	-3	31							
	52	40		"							
	1	31		"							
	2	22		"							
	4	12.5		"							
	8	7		"							
	15	4		32							
	30	2.5		"							
10:46	60	1.5		"							
11:46	120	1.5		"							
1:46	240	1		"							
5:46	480	0.5									
28/4	9:28 AM	0.5		32							
29/4	9:22 AM	0.5		32							
30/4	9:20 AM	0.5		32							



Review & analysis

394
31

Job No.: _____

Container: 1055 / 850

Soil Sample _____

WT of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: _____

Wt. of Soil 100.0 gm

Sample No.: _____

Performed by: _____

Sample depth: _____

Date: 26/04/21

$D_{10} =$

2.0

$$D_{30} =$$

D₆₀ =

$C_u =$

$$C_2 =$$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 26/04/21

Tested by: _____

Location: _____

Boring No. : 119 Sample Depth. _____Sample No. : D-2, 3

Determination No.				
Bottle No.		<u>14</u>		
Wt. of Bottle + Water + Soil W ₁ in g		<u>373.5</u>		
Temperature T in °C		<u>32</u>		
Wt. of Bottle + Water W ₂ in g		<u>341.9</u>		
Evaporating Dish No.		<u>15</u>		
Wt. of dish	g	<u>312.3</u>		
Wt. of dish + dry soil	g	<u>362.1</u>		
Wt. Bottle + Dry Soil in	g			
Wt. of Bottle in	g	<u>94.0</u>		
Wt. of Soil W _s in	g	<u>49.8</u>		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

SL.394

cont: 1055

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H: 119

Sample: D-2,3

Depth: 0 3, 4 M

Test No.:

Date: 25/04/2024

Tested by:

Grey
Clayey
silt

LH

Liquid Limit					
No. of Blows					
Container No.	2211	2251	48	2199	2140
Wt. Container, gm	10.09	8.86	6.88	9.55	10.56
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W _w in gm					
Wt. Dry sol, W _s in gm					
Water content, W, in %					

Plastic Limit				
Container No.	2232	2319	2329	
Wt. Container, gm	9.97	9.34	9.60	
Wt. Container + Wet Soil				
Wt. Container + Dry Soil				
Wt. Water, W _w in gm				
Wt. Dry sol, W _s in gm				
Water content, W, in %				

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

SI-394

Department of Civil Engineering, BUET
Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: _____

Tested by: _____

Hydrometer No. 152 H867452

Meniscus Correction: _____

W_s , in g 50

Location: _____

Boring No.: 119 Sample No. D-24, 20

Sample Depth: 36, 2000 n

Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	R = 1000(r-1)	$R_w = 1000(r_w-1)$	Temp. in °C	R-Rw	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
27/8		4	48	-3	31						
		5	45								
		1	41								
		2	35								
		4	28								
		8	21.5								
		15	16		32						
		30	12		"						
10:34	60	9.5			11						
11:34	120	7			11						
1:34	240	5.5									
5:34	480	5.0									
28/4	9:26 AM	4.0			32						
29/4	9:19 AM	3.5			32						
30/4	9:18 AM	3			32						

Review / analysis

b1 394

Job No.: _____

Container 721/8204

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: _____

Wt of Soil 100.0 gm

Sample No.: _____

Performed by: _____

Sample depth: _____

Date: 26/04/21

$P_{10} =$

2·3

$$D_{30} =$$

$$D_{60} =$$

$C_m =$

$C_1 =$

F.M. =

SL-394

Department of Civil Engineering, BUET

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 26/4/21

Tested by: _____

Location: _____

Boring No. : _____ Sample Depth. _____

Sample No. : _____

Determination No.				
Bottle No.		8		
Wt. of Bottle + Water + Soil W_1 in g		372.8		
Temperature T in $^{\circ}\text{C}$		32		
Wt. of Bottle + Water W_2 in g		341.1		
Evaporating Dish No.		20		
Wt. of dish g		279.7		
Wt. of dish + dry soil g		329.5		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		92.7		
Wt. of Soil W_s in g		49.8		
Specific Gravity of Water G_T at $T^{\circ}\text{C}$				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

SP 394

Cont: 721

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H: 119

Sample: D-24

Depth: 36.0 M

Test No.:

Date: 24/04/2021

Tested by:

Liquid Limit					
No. of Blows	15	20	24	11	
Container No.	2215	2151	2247	2085	2146
Wt. Container, gm	9.17	9.46	9.54	10.54	9.63
Wt. Container + Wet Soil	42.80	38.39	38.74	42.44	
Wt. Container + Dry Soil	33.38	30.62	30.90	33.45	
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

sand
mixture

Plastic Limit					
Container No.	2267	2097	2108		
Wt. Container, gm	10.65	11.30	9.89		
Wt. Container + Wet Soil	44.60	49.12	43.70		
Wt. Container + Dry Soil	37.22	40.82	36.33		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

LH
* Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



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Department of Civil Engineering, BUET

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Location: _____

Date: _____

Boring No.: 119 Sample No. D-31, 32, 33

Tested by: _____

Sample Depth: 46.5, 48.0, 49.5 M

Hydrometer No. 152 H867452

Specific Gravity, G_s _____

Meniscus Correction: _____

W_s in g 50

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
27/4	4	47	-3	31							
	52	41			"						
	1	36			"						
	2	30			"						
	4	26			"						
	8	22			"						
	15	19.5		32							
	30	17		"							
10:38	60	14.5		"							
11:38	120	12.5		"							
1:38	240	11		"							
5:38	480	9.5									
28/4	9:27 Am	8		32							
29/4	9:20 Am	7.5		32							
30/4	9:19 Am	7		32							

SL-394

Non catalysis

Job No.: _____

Container: 1054/718

Soil Sample _____

Wt. of Container + Soil : _____

Location: _____

Wt. of Container: _____

Boring No: _____

Wt. of Soil 100.0 g

Sample No.: _____

Performed by: _____

Sample depth: _____

Date: 26/04/21

$D_{10} =$

$$D_{30} =$$

D₆₀ =

$C_{II} =$

$C_2 =$

F.M. =

SL 394

Department of Civil Engineering, BUET
Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 26/4/21

Tested by: _____

Location: _____

Boring No.: _____ Sample Depth: _____

Sample No.: _____

Determination No.			
Bottle No.	7		
Wt. of Bottle + Water + Soil W_1 in g	371.7		
Temperature T in °C	32		
Wt. of Bottle + Water W_2 in g	340.4		
Evaporating Dish No.	22		
Wt. of dish g	251.9		
Wt. of dish + dry soil g	301.4		
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g	91.9		
Wt. of Soil W_s in g	49.5		
Specific Gravity of Water G_T at T°C			
Specific Gravity of Soil: G _s			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

cont No = 1054

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

0.445 119Date: 23/4/21

Sample: D-31, 32, 33

Tested by: _____

Depth: 46.5, 48.0, 49.5 M

Liquid Limit					
No. of Blows	15	19	24	29	35
Container No.	2045	145	100	9023	2039
Wt. Container, gm	10.37	7.09	7.54	10.88	9.21
Wt. Container + Wet Soil	45.75	45.30	44.68	47.50	46.90
Wt. Container + Dry Soil	36.30	35.38	35.15	38.24	37.43
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
Silty
Clay

Plastic Limit					
Container No.	872	20	724		
Wt. Container, gm	7.03	7.38	7.43		
Wt. Container + Wet Soil	40.21	38.86	42.06		
Wt. Container + Dry Soil	34.50	33.37	36.03		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Location: _____

Date: 21/4/21

Boring No.: 120 Sample No. UD-2

Tested by: _____

Sample Depth: 8.10 - 8.55 M

Hydrometer No. 152H 867452

Specific Gravity, G_s: _____

Meniscus Correction: _____

W_s, in g 50.0

R_r = 2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
22/4	1/4	48	-3	30							
	1/2	45		30							
	1	38		"							
	2	30		"							
	4	17.5		"							
	8	10		"							
	15	6.5		"							
	30	4.0		"							
10:34	60	3.5		"							
11:34	120	3.0		"							
11:34	240	2.5		30							
	5:34	480	2.0								
23/4	9:14	2.0		30							
24/4	9:13 AM	2.0		30							
25/4	9:13 AM	2.0		31							

SL-394

Diodes Analysis

Job No.:

Soil Sample

Location:

Boring No: 120

Sample No.: UD-2

Sample depth: 30

Sample depth: _____

Container

1318/689

Wt. of Container + Soil

Wt. of Container:

Wt. of Soil

Performed by:

Dalc: 21/09/21

D₁₀ =

$$D_{30} =$$

$$D_{60} =$$

$C_\mu =$

$C_7 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
H/1318Test No.: _____
Date: 21/10/21
Tested by: _____

Location: _____

Boring No.: 120 Sample Depth. 8.10 - 8.55 MSample No.: UD - 2

Determination No.			
Bottle No.		10	
Wt. of Bottle + Water + Soil W ₁ in g		373.5	
Temperature T in °C		30	
Wt. of Bottle + Water W ₂ in g		342.0	
Evaporating Dish No.		22	
Wt. of dish	g	251.9	
Wt. of dish + dry soil	g	301.6	
Wt. Bottle + Dry Soil in	g		
Wt. of Bottle in	g	93.6	
Wt. of Soil W _s in	g	49.7	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

can-1318

SLV 394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____
D.H.120
UD-2
D-8.10-8.55

Test No.:

Date:

Tested by:

Liquid Limit					
No. of Blows	122	2245	2187	003	2278
Container No.	7.56	9.90	9.51	7.49	9.11
Wt. Container, gm					
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2215	145	2045
Wt. Container, gm	9.17	7.11	10.36
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry soil, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

ED

SI-394

Department of Civil Engineering, BUET
Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Location: _____

Date: _____

Boring No.: 120 Sample No. 24, 25, 26Hydrometer No. 152 H 867452Sample Depth: 36, 37.5 M, 39 M

Meniscus Correction: _____

Specific Gravity, G_s _____ W_s , in g 50

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
28/4	4	47	-3	31							
	2	43			11						
	1	38			11						
	2	32.5			11						
	4	26			11						
	8	22.5			1						
	15	17.5		32							
	30	14.5			11						
10:42	60	11.5			11						
11:42	120	9.5			11						
1:42	240	8			11						
5:42	480	6.5									
28/4	9:28 Am	5.0		32							
29/4	9:21 Am	4.5									
30/4	9:20 Am	3.5		32							

Review of analysis

Container

609 / 709

Wt. of Container + Soil

Wt. of Container

Wt. of Soil

Wt. of Soil 100.0 g

is formed by

performed by

Dalc: 26

$$D_{10} =$$

$$D_{30} =$$

$$D_{60} =$$

$$C_H =$$

$C_7 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 26/04/21

Tested by: _____

Location: _____

Boring No. : 120 Sample Depth. _____Sample No. : D-24, 25, 26

Determination No.				
Bottle No.		<u>15</u>		
Wt. of Bottle + Water + Soil W_1 in g		<u>380.2</u>		
Temperature T in °C		<u>32</u>		
Wt. of Bottle + Water W_2 in g		<u>348.8</u>		
Evaporating Dish No.		<u>23</u>		
Wt. of dish g		<u>323.8</u>		
Wt. of dish + dry soil g		<u>373.6</u>		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		<u>100.8</u>		
Wt. of Soil W_s in g		<u>49.8</u>		
Specific Gravity of Water G_T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

Cont: 609

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H: 120

Sample: D-24, 25, 26

Depth: 36, 37.5, 39 M

Test No.:

Date: 25/04/2021

Tested by:

Liquid Limit					
No. of Blows	16	21	25	29	33
Container No.	2187	149	2246	9013	808
Wt. Container, gm	9.53	7.24	8.73	7.04	7.37
Wt. Container + Wet Soil	41.40	41.83	36.54	40.88	42.20
Wt. Container + Dry Soil	34.23	34.27	30.34	33.57	34.68
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2225	2302	883		
Wt. Container, gm	9.85	9.27	11.26		
Wt. Container + Wet Soil	46.21	50.37	48.35		
Wt. Container + Dry Soil	40.92	43.58	42.18		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

5D

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: 22/5/21

Location: _____

Tested by: _____

Boring No.: 122 Sample No. UD-1Hydrometer No. 152H 867452Sample Depth: 0.55M to 1.05M

Meniscus Correction: _____

Specific Gravity, G_s _____ W_s , in g 50.0 gm

R²/

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z, in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/5	1/4	48	-4	31							
	1/2	46			1						
	1	44			4						
	2	42.5			4						
	4	40.5			4						
	8	37.5			11						
	15	34			11						
	30	30			11						
	10:28	60	26		4						
	11:28	120	23		11						
	11:28	240	19.5		11						
	5:28	480	16.5		31.5						
24/5	9:03 Am	13			34						
25/5	9:09 Am	11.5			30.5						
26/5	9:10 Am	11			30						

bv 394

Movie Analysis

Job No.: _____

Container: 1174/780

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 122

Wt. of Soil 100.0 gm

Sample No.: UD-1

Performed by: _____

Sample depth: 0.55 M" to 1.05 M

Date: 22/05/21

24

$P_{10} =$

$$D_{30} =$$

$$D_{60} =$$

$C_u =$

$C_2 =$

F.M. =

cont NO = 1174

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

(N-394)
 (44) Soil Sample _____
 B.H! 122
 sample: UD-1
 Depth: 0.55 - 1.05 M

Test No.:

Date: 19/5/21

Tested by:

Liquid Limit					
No. of Blows	15	21	26	30	35
Container No.	2325	005	2128	129	2042
Wt. Container, gm	9.39	7.36	10.58	7.23	10.05
Wt. Container + Wet Soil	41.80	40.83	46.10	43.75	42.83
Wt. Container + Dry Soil	30.80	29.97	34.82	32.34	32.68
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2064	2030	2145
Wt. Container, gm	10.66	10.47	9.41
Wt. Container + Wet Soil	39.52	46.10	40.99
Wt. Container + Dry Soil	33.55	38.68	34.47
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SP-394Soil Sample: _____
_____Test No.: _____
Date: 28/08/2021

Location: _____

Tested by: _____
Hydrometer No. 1524867452Boring No.: 123 Sample No. D-31, 32, 33

Meniscus Correction: _____

Sample Depth: 46.5, 48, 49.5 MW_s in g 50Specific Gravity, G_s _____

R² = 2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
29/8	4	46	-3	29							
	1/2	43			1						
	1	39.5			1						
	2	34			1						
	4	30			1						
	8	26			11						
	15	22.5			1						
	30	19			1						
10:24	60	16.5			29						
11:24	120	14			4						
1:24	240	12			1						
5:24	480	10.5			1						
30/8	9:25	11	9		29						
31/8	8:55	An	8.5		29						
01/9	9:32	An	7		29						



Methodology

Job No.:

Container: 1059/1260

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

WT of Container _____

Boring No: 123

Wt of Soil 100.0 gm

Sample No.: D-31, 32, 33

Performed by: _____

Sample depth: _____

Date: 28/8/14

D₁₀

D₂₀

D₆₀

C 24

$C_0 =$

PM

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 28/08/21

Tested by: _____

Location: _____

Boring No.: 123 Sample Depth. _____Sample No.: D-31, 32, 33

H
1059

Determination No.				
Bottle No.		9		
Wt. of Bottle + Water + Soil W ₁ in g		371.9		
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		340.6		
Evaporating Dish No.		16		
Wt. of dish g		310.4		
Wt. of dish + dry soil g		359.9		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		92.0		
Wt. of Soil W _s in g		49.5		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

cont NO=1059

Mithunmian

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H.B 123

Date: 26/8/21

Sample: D-31, 32, 33

Tested by: _____

Depth: 46.5, 48, 49.5

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2068	880	888	854	803
Wt. Container, gm	8.75	10.79	7.04	7.11	11.23
Wt. Container + Wet Soil	47.09	46.21	44.58	47.33	53.24
Wt. Container + Dry Soil	36.41	36.63	34.60	36.83	42.31
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

(Grey)

Silty

Clay

Plastic Limit			
Container No.	9015	33	782
Wt. Container, gm	7.01	7.79	7.04
Wt. Container + Wet Soil	45.40	45.01	44.73
Wt. Container + Dry Soil	38.43	38.16	37.84
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

⑥

SURVEY 2000

SAMPLE TICKET

Project: Elevated Expressway/Road from Mithamain

Sadar to Karimganj Upazilla

Client: BBA

Location: Mithamain, Kishoreganj

Bore Hole No: 124

Depth: 32.5 m

Sample type: D-25

Signature: om

1199

Location: _____

Boring No.: 124 Sample No. D-25

Sample Depth: 37.5

Specific Gravity, G_s _____

Civil Engineering, BUET

Engineering Laboratory

TEST ANALYSIS

Test No.:

Date: 23/10/2021

Tested by: _____

Hydrometer No. 152H 867452

Meniscus Correction: _____

W_s in g 50R²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/10		1 49	~3	28							
		2 47		4							
		1 43.5		11							
		2 37		11							
		4 31		11							
		8 24		11							
		15 18.5		11							
		30 15		11							
10:10		60 11		11							
11:10		120 9		11							
11:10		240 7.5		11							
5:10		480 6.5		11							
24/10	8:50 Am	5.5		29							
25/10	8:59 Am	5.0		29							
26/10	9:01	4.5		11							

SI-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Sieve Analysis

Job No.: _____

Container: 1199 / 1259

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 124

Wt. of Soil 100 gm _____

Sample No. : D-25

Performed by: _____

Sample depth: _____

Date: 23/10/21

Sieve No.	Sieve opening (mm)	Wt. of sieve (gm)	Wt. of sieve+soil (gm)	Wt. of soil retained (gm)	% of soil retained	Cumulative % retained	% Finer
4							
8							
16							
30							
50							
100				0.5			
200				1.1			
Pan				98.4			
				100			

D₁₀ =

1.6

D₃₀ =D₆₀ =C_u =C_v =

F.M. =

SI-394

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
_____Test No.: _____
Date: 23/10/21
Tested by: _____

Location: _____

Boring No.: 124 Sample Depth: _____

Sample No.: D-25

H-1199

Determination No.			
Bottle No.	26		
Wt. of Bottle + Water + Soil W ₁ in g	384.9		
Temperature T in °C	28		
Wt. of Bottle + Water W ₂ in g	353.3		
Evaporating Dish No.	26		
Wt. of dish g	272.0		
Wt. of dish + dry soil g	321.6		
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g	105.0		
Wt. of Soil W _s in g	49.6		
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Cont No: 1199

Atterberg Limit Test

Soil Sample _____

Test No.: _____

BH : 124

Date: 2021

Sample: D-25

Tested by:

Depth : 37.5 M

Liquid Limit					
No. of Blows	~	~	~	~	~
Container No.	2104	2152	2185	2181	2125
Wt. Container, gm	9.83	10.16	8.96	10.23	9.70
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2332	888	825
Wt. Container, gm	9.09	11.18	7.02
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394
SK-394
Soil Sample: Mithamain

Test No.: 19/6/21
Date: 19/6/21

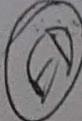
Location: Boring No. 125 Sample No. UD-2
Sample Depth: 5.10 - 5.55 M

Tested by: Hydrometer No. 152 H 867452
Meniscus Correction: W_s, in g 50.0 gm

Specific Gravity, G_s: 2.68

R_r=1

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
20/6	1/4	48	-4	28							
	1/2	47			27						
	1	46			"						
	2	45.5			"						
	4	44			"						
	8	42			"						
	15	38.5			"						
	30	36.5			"						
10:32	60	34			27						
11:32	120	30			28						
11:32	240	26			"						
5:32	480	22.5			"						
21/6	9:04	Am	18.0		27						
22/6	9:23	Am	15		"						
23/6	9:16	Am	13		28						



Mithamain's

Geotechnical Engineering Laboratory
Department of Civil Engineering, Biju P

42-394

None analysis

Job No.: _____

Soil Sample _____

Location: _____

Boring No: 125

Sample No.: UD-2

Sample depth: 5.10-5.55 M

Container: 1308 / 1205

Wt. of Container + Soil _____

Wt. of Container: _____

Wt. of Soil 100.0 gms

Performed by: _____

Date: _____

D_{1C} =

$$D_{30} =$$

D₆₀ =

$$C_U =$$

$C_7 =$

F.M. =

cont No = 1308

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H: 125

Sample: UD-2

Depth: 5.10-5.55 M

Test No.:

Date: 17/6/21

Tested by:

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2239	2059	2271	2256	2025
Wt. Container, gm	10.26	10.93	9.10	8.63	9.65
Wt. Container + Wet Soil	46.81	45.46	42.65	47.10	40.62
Wt. Container + Dry Soil	31.65	31.49	29.41	32.17	28.64
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Gray
silty
clay

Plastic Limit			
Container No.	2221	2173	2331
Wt. Container, gm	9.40	11.88	9.89
Wt. Container + Wet Soil	38.48	43.66	41.55
Wt. Container + Dry Soil	31.50	36.00	33.96
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

L+H

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____
_____Test No.: _____
Date: 31/08/2021

Location: _____

Tested by: _____
Hydrometer No. 152/867452Boring No.: 127 Sample No. D-2, 3, 4

Meniscus Correction: _____

Sample Depth: 6.0, 7.5, 9 MW_s in g _____Specific Gravity, G_s _____

R²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
01/9	4	34	-3	29							
	5	25			"						
	1	20			"						
	2	14.5			"						
	4	11			"						
	8	8.5			"						
	15	7			"						
	30	5.5			29						
10:16	60	4			"						
11:16	120	4			"						
1:16	240	2.5			"						
5:16	480	2			29						
02/9	9:12 Am	1			29						
03/9	9:17	1			29.						
04/9	9:06 Am	1			29.5						



Civil Engineering Laboratory
Department of Civil Engineering, BJPU

None analysis

52-394

Job No.: _____

Container: 1195/798

Soil Sample

Wt. of Container + Soil _____

Location:

Wt. of Container _____

Boring No: 127

Wt. of Soil 100.0 gm

Sample No.: D-2, 34

Performed by: _____

Sample depth:

Date: 31/08/21

28.8.

$$D_{10} =$$

$$D_{30} =$$

$$D_{60} =$$

$$C_{\parallel} =$$

$C_2 =$

FM =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
_____Test No.: _____
Date: 31/08/21
Tested by: _____

Location: _____

Boring No.: 127 Sample Depth. _____Sample No.: D-2, 3, 4

H
1195

Determination No.			
Bottle No.		14	
Wt. of Bottle + Water + Soil W ₁ in g		374.1	273.6
Temperature T in °C		29	
Wt. of Bottle + Water W ₂ in g		342	
Evaporating Dish No.		21	
Wt. of dish g		302.9	302.4
Wt. of dish + dry soil g		352.4	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		94	
Wt. of Soil W _s in g		50.0	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2}$$
 G_s _____

88.394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Contd: 1195

Atterberg Limit Test

Soil Sample _____

BH : 12F

Sample : D-2, 3, 4

Depth : 6.0, 7.5, 9.0 M

Test No.: _____

Date: 28/08/2021

Tested by: _____

Liquid Limit					
No. of Blows					
Container No.	2085	2164	2130	2217	2059
Wt. Container, gm	10.52	11.12	9.68	10.23	10.87
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	007	767	860
Wt. Container, gm	7.20	10.83	7.42
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: SJ.394Test No.: 31/08/2021Location: 13SATested by: Hydrometer No. 150#867452Boring No.: 127 Sample No. D-32,33

Meniscus Correction: _____

Sample Depth: 48.0, 49.5 MW_s in g: _____Specific Gravity, G_s: _____R²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
01/9	4	48	-3	29							
	1/2	43			"						
	1	39			"						
	2	35			"						
	4	31.5			"						
	8	28.5			"						
	15	26			"						
	30	23		29							
10:04	60	20			"						
11:04	120	18			"						
1:04	240	15			"						
	5:04	480	13.5		29						
02/9	9:09 Am	12			29						
03/9	9:16	11			29.						
04/9	9:05 Am	10			29.5						



Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Review analysis

Container: 1359/834

Wt. of Container + Soil _____

Wt. of Container _____

Wt. of Soil 100.0 g m

Performed by _____

Date: _____

D_{IC} =

$$D_{30} =$$

$$D_{60} =$$

$$C_{11} =$$

C =

$$F.M_i =$$

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 31/08/21

Tested by: _____

Location: _____

Boring No. : 127 Sample Depth. _____Sample No. : D - 32, 33

Determination No.				
Bottle No.		10		
Wt. of Bottle + Water + Soil W ₁ in g		<u>373.6</u>	373.1	
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		<u>342.2</u>		
Evaporating Dish No.		18		
Wt. of dish g		<u>298.7</u>	298.2	
Wt. of dish + dry soil g		<u>347.5</u>		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		93.6		
Wt. of Soil W _s in g		49.3		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

Cont: 1354

SF 394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No. _____

B-H: 127

Date: 28/08/2021

Sample: D-32, 33

Tested by: _____

Depth: 48.0, 49.5 M

Liquid Limit					
No. of Blows	16	20	25	31	35
Container No.	751	50	762	214	757
Wt. Container, gm	6.84	11.01	7.83	7.34	7.01
Wt. Container + Wet Soil	46.33	48.90	45.61	49.88	42.69
Wt. Container + Dry Soil	34.10	37.45	34.28	37.40	32.35
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2064	2054	800
Wt. Container, gm	10.66	8.49	7.71
Wt. Container + Wet Soil	55.26	58.53	50.84
Wt. Container + Dry Soil	47.86	50.31	43.72
Wt. Water, W_w in gm			
Wt. Dry soil, W_d in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:



Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: 22/5/21

Tested by: _____

Hydrometer No. 1524867452

Meniscus Correction: _____

W_s in g 50.0

Location: _____

Boring No.: 128 Sample No. UD-2Sample Depth: 8.05 - 8.55 MSpecific Gravity, G_s: _____

R

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
23/5	1/4	48	-4	31							
	1/2	45			4						
	1	42			4						
	2	38.5			9						
	4	34			4						
	8	31			4						
	15	27			4						
	30	22.5			4						
10:44	60	18.5			11						
11:44	120	15.5			11						
11:44	240	13			11						
5:44	480	10.5			31.5						
24/5	9:05 Am	8.0			31						
25/5	9:11 Am	7.5			30.5						
26/5	9:13 Am	7.0			30						

4L-394

Review analysis

Job No.: _____

Container 1289/855

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 128

Wt. of Soil 100.0 gm

Samples No : VP-2

W. C. Goss

Sample No.: UD 2

Performed by: _____

Sample depth: 8.05-0

Date: 22/04/21

—
—

2.5

D_{1C} =

$$D_{30} =$$

$$D_{60} =$$

$C_U \equiv$

$$C_2 =$$

F.M. =

Cont No 1289

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

SL-394

(44)

Atterberg Limit Test

Soil Sample _____

Test No. _____

B.H : 128

Date: 19/5/21

Sample: UD - 2

Tested by: _____

Depth: 8.05 - 8.55 M

Liquid Limit					
No. of Blows	15	19	24	30	35
Container No.	2146	2347	2149	2258	2071
Wt. Container, gm	9.63	9.73	8.98	10.90	9.50
Wt. Container + Wet Soil	44.85	43.98	41.44	45.79	40.91
Wt. Container + Dry Soil	34.36	34.04	32.55	36.22	32.50
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2045	2087	2217		
Wt. Container, gm	10.37	11.31	10.25		
Wt. Container + Wet Soil	43.62	45.65	42.29		
Wt. Container + Dry Soil	36.66	38.45	35.60		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

L+H Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

(2) Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Department of Civil Engineering, BUET
 Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394

Soil Sample: _____

Test No.: _____

Date: 28/08/2021

138VR
Location: _____

Tested by: _____

Boring No. : 130 Sample No. D-26, 27

Hydrometer No. 152 H 867452

Sample Depth : 40.5, 42.0 M

Meniscus Correction: _____

Specific Gravity, G_s _____

W_s , in g 50

$R_r = 2$

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R - R_w$	N in %	Z_r in cm	$\sqrt{\frac{Z_r}{t}}$ in cm/min	D in mm	N
29/8		½	44	-3	29						
		½	40		"						
		1	35		"						
		2	28		"						
		4	24		"						
		8	21		"						
		15	17.5		"						
		30	15.5		"						
	10:36	60	13		29						
	11:36	120	11		"						
	1:36	240	9		"						
	5:36	480	8		"						
30/8	9:28 am		6.5		29						
31/8	8:57 Am		5.5		29						
01/9	9:35	An	4.5		29						



SL-394

Movie Analysis

Job No.: _____

Container: 1384 / 1175

Soil Sample _____

Wt. of Container + Soil :

Location: _____

Wt. of Container: _____

Boring No: 130

Wt. of Soil 109.0 g mi

Samples No.: D-26, 27

1866-1870

Sample No.: 405 32 A

Performed by: _____

D_{1G} =

$$D_{30} =$$

$$D_{60} =$$

$$C_u =$$

$C_7 =$

F.M. =

SL-394

Department of Civil Engineering, BUET

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
_____Test No.: _____
Date: 28/8/21

Tested by: _____

Location: _____

Boring No.: 130 Sample Depth. _____

Sample No.: D-27,27

H
1384
Grey

Determination No.			
Bottle No.	15		
Wt. of Bottle + Water + Soil W ₁ in g	380.3		
Temperature T in °C	29		
Wt. of Bottle + Water W ₂ in g	349		
Evaporating Dish No.	18		
Wt. of dish g	298.1		
Wt. of dish + dry soil g	347.7		
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g	100.8		
Wt. of Soil W _s in g	49.6		
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2}$$
 G_s _____

Conf. 1384

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

D.L: 130

Date: 25/08/2021

Sample: D - 26, 27

Tested by:

Depth: 39.0, 40.5 M

Liquid Limit					
No. of Blows	15	21	25	31	35
Container No.	2324	2069	2170	2025	2126
Wt. Container, gm	10.45	11.96	10.54	9.63	8.65
Wt. Container + Wet Soil	47.64	51.04	47.78	45.10	42.59
Wt. Container + Dry Soil	37.05	40.17	37.56	35.50	33.48
Wt. Water, W_w in gm					
Wt. Dry soil, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2118	2267	2172
Wt. Container, gm	9.32	10.66	9.98
Wt. Container + Wet Soil	57.05	54.00	55.90
Wt. Container + Dry Soil	48.76	46.44	47.99
Wt. Water, W_w in gm			
Wt. Dry soil, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

EJ

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____
_____Test No.: _____
Date: 31/08/2021

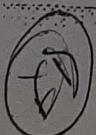
Location: _____

Tested by: _____
Hydrometer No. 152/H867452Boring No.: 131 Sample No. D-23, 24, 25

Meniscus Correction: _____

Sample Depth: 34.5, 36, 37.5 MW_s in g _____Specific Gravity, G_s _____R²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
01/9	4	47	-3	29							
	5	42			"						
	1	37			"						
	2	31			"						
	4	24			"						
	8	19			"						
	15	15.5			"						
	30	11.5		29							
10:20	60	8.5			"						
11:20	120	7			"						
1:20	240	5			"						
5:20	480	4		29							
02/9 9:13 Am		3.5		29							
03/9 9:18		3		29							
04/9 9:07 Am		3		29.5							



Sieve analysis

Job No.: _____

Container 930/872

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container _____

Boring No: 131

Wt. of Soil 100.0 gm

Sample No.: D-23,24,25

Performed by: _____

Sample depth: _____

Date: 31/08/21

Dic =

$$D_{30} =$$

$$D_{60} =$$

$C_{\text{II}} =$

$C_2 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____
_____Test No.: _____
Date: 31/08/21

Tested by: _____

Location: _____

Boring No. : 131 Sample Depth. _____Sample No. : D-23, 24, 25

H
930

Determination No.				
Bottle No.		16		
Wt. of Bottle + Water + Soil W ₁ in g		<u>382.9</u>	381.7	
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		350		
Evaporating Dish No.		26		
Wt. of dish g		272.7	272.1	
Wt. of dish + dry soil g		322		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		102.1		
Wt. of Soil W _s in g		49.9		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _S				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_S _____

cont No = 930

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

B.H : 131

Sample : D - 23, 24, 25

Depth : 34.5, 36, 37.5 M

Test No.: _____

Date: 28/8/21

Tested by: _____

Liquid Limit					
No. of Blows					
Container No.	605	805	730	845	756
Wt. Container, gm	7.37	6.95	10.90	7.74	7.11
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
Clayey
Silt

Plastic Limit			
Container No.	150	775	168
Wt. Container, gm	7.23	7.15	7.00
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

LTH

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

Date: 31/08/2024

Location: _____

Tested by: _____

Boring No.: 132 Sample No. D-2, 3, 4Hydrometer No. 152 H 867452Sample Depth: 6.0, 7.5, 9.0 M

Meniscus Correction: _____

Specific Gravity, G_s _____ W_s , in g _____ $R_{rw} = 2$

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R - R_w$	N in %	Z_r in cm	$\sqrt{\frac{Z_r}{t}}$ in cm/min	D in mm	N
01/9	14:40	-3	29								
	14:52	33			"						
	15:01	27			"						
	15:02	20			"						
	15:04	15			"						
	15:08	10.5			"						
	15:15	8			"						
	15:30	6		29							
10:12	60	5			"						
11:12	120	4			"						
1:12	240	3			"						
5:12	480	2.5		29							
02/9	9:11 Am	2		29							
03/9	9:17	2		29.							
04/9	9:08 Am	1.5		29.5							



Autodesk Engineering Laboratory
Department of Civil Engineering, BUET

None / catalysis

Job No.: _____

Container: 1353/1249

Soil Sample

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 132

Wt. of Soil = 100.0 gm

Sample No.: D-2,3,4

Performed by: _____

Sample depth: _____

Date: 31/08/21

D_{1c} =

$$D_{30} =$$

$$D_{60} =$$

$C_U =$

- C₂ =

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 31/08/21

Tested by: _____

Location: _____

Boring No. : 132 Sample Depth. _____Sample No. : D-2,3,4

Determination No.				
Bottle No.		15		
Wt. of Bottle + Water + Soil W ₁ in g		<u>380.9</u>	380.4	
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		349		
Evaporating Dish No.		25		
Wt. of dish g		<u>284.0</u>	283.5	
Wt. of dish + dry soil g		334.4		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		100.8		
Wt. of Soil W _s in g		49.9		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2}$$
 G_s _____

88-394

Cont: 1353

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

BH : 132

Sample: D-2, 3, 4

Depth : 6.0, 7.5, 9.0 M

Test No.: _____

Date: 28/08/2021

Tested by: _____

Liquid Limit					
No. of Blows					
Container No.	2217	2164	2085	2059	2130
Wt. Container, gm	10.23	11.12	10.52	10.87	9.65
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	860	007	767		
Wt. Container, gm	7.42	7.26	10.83		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____

Test No.: _____

1050

Location: _____

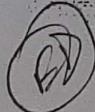
Date: 31/08/2021Boring No. 135 Sample No. D - 6, 7, 8Tested by: _____
Hydrometer No. 152/H 867452Sample Depth: 9.0, 10.5, 12.0 M

Meniscus Correction: _____

Specific Gravity, G_s : _____ W_s , in g: _____

$R^2 = 0.99$

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z}{t}} \text{ in cm}$	D in mm	N
01/9	4	42	-3	29							
	1/2	34			"						
	1	27			"						
	2	21			"						
	4	16.5			"						
	8	12			"						
	15	10			"						
	30	8		29							
10:00	60	6			"						
11:00	120	5			"						
1:00	240	4			"						
5:00	480	3		29							
02/9	9:08 Am	3		29							
03/9	9:15 Am	3		29.							
04/9	9:05	2.5		29.5							



Structural Engineering Laboratory
Department of Civil Engineering, BUJIT

Movie analysis

SL 394

Job No.: _____

Container: 1050/1272

Soil Sample

Wt. of Container + Soil : _____

Location: _____

Wt. of Container: _____

Boring No: 135

Wt. of Soil = 100.0 gm

Sample No.: D-6,7,8

Performed by: _____

Sample depth: _____

Date: _____

$D_{1c} =$

$$D_{30} =$$

$$D_{60} =$$

$C_0 =$

. C_z =

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

SL 394
Soil Sample: _____

Test No.: _____

Date: 31/08/12

Tested by: _____

Location: _____

Boring No.: 135 Sample Depth. _____Sample No.: D-6, 7, 8

Determination No.				
Bottle No.		20		
Wt. of Bottle + Water + Soil W ₁ in g		373.5		
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		342		
Evaporating Dish No.		10		
Wt. of dish g		163.2		
Wt. of dish + dry soil g		213.0		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		94		
Wt. of Soil W _s in g		49.8		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_s W_s}{W_s - W_1 + W_2}$ G_s _____

Milhamain

Cont: 1050

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample

B.H: 135

Sample: D-6, 7, 8

Depth: 9.0, 10.5, 12.0 M

Test No.:

Date: 28/08/2021

Tested by:

Liquid Limit					
No. of Blows					
Container No.	2059	2164	2130	2085	2217
Wt. Container, gm	10.87	11.12	9.65	10.52	10.23
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	767	860	007		
Wt. Container, gm	10.83	7.42	7.20		
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

(FV)

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____
_____Test No.: _____
Date: 31/08/2021

Location: _____

Tested by: _____
Hydrometer No. 152H867452Boring No.: 135 Sample No. D-14, 15, 16

Meniscus Correction: _____

Sample Depth: 21, 22, 5, 24 MW_s in g _____Specific Gravity, G_s _____

$$R_r = \frac{Z}{t}$$

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z}{t}} \text{ in cm}$	D in mm	N
01/9		45	-3	29							
		37			"						
		29			"						
		23			"						
		16			"						
		10			"						
		7.5			"						
		5.5		29							
10:24	60	4.5			"						
11:24	120	3.5			"						
1:24	240	3.0			"						
5:24	480	2.5		29							
02/9	9:14 Am	2.5		29							
03/9	9:18	2		29							
04/9	9:07 Am	2		29.5							

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DEPARTMENT OF COMMERCE.

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Harbin Net

Sample No. 1 D-1115-10

Sample analysis

Container 1362/1115

W.L. at Chanteloup, 4 Sept.

Wt. of Container

WU WIRED

Published by

Date: 01/08/21

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DRAFT

23

1

M

Department of Civil Engineering, BUET
 Geotechnical Engineering Laboratory
 SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____
 Date: 31/08/21

Tested by: _____

Location: _____

Boring No.: 135 Sample Depth. _____

Sample No.: D-14,15,16

Determination No.				
Bottle No.		19		
Wt. of Bottle + Water + Soil W ₁ in g		370.8		
Temperature T in °C		29		
Wt. of Bottle + Water W ₂ in g		339.2		
Evaporating Dish No.		8		
Wt. of dish g		165.7		
Wt. of dish + dry soil g		215.6		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		91.2		
Wt. of Soil W _s in g		49.9		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _S				

Remarks
$$\frac{G_T W_s}{W_s - W_1 + W_2}$$
 G_S _____

Cont: 1352

88.394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample
B.H: 135

Test No.:

Date: 28/08/2021

Sample: D-14, 15, 16

Tested by:

Depth: 21.0, 22.5, 24 M

Liquid Limit					
No. of Blows					
Container No.	2059	2164	2130	2085	2217
Wt. Container, gm	10.87	11.12	9.65	10.52	10.23
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	767	860	007
Wt. Container, gm	10.83	7.42	7.20
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

ED

SURVEY 2000
SAMPLE TICKET

1320

Project: Elevated Expressway/Road from Mithamain
Sadar to Karimganj Upazilla
Client: BBA
Location: Mithamain, Kishoreganj

Civil Engineering, BUET

Engineering Laboratory

TESTER ANALYSIS

Test No.:

Date: 12/10/2021

Tested by:

Hydrometer No. 152H 867452

Meniscus Correction:

W_s in g 50

Location: _____

Boring No.: 136 Sample No. D-21, 22

Sample Depth: 31.50, 33.0 M

Specific Gravity, G_s _____

Date	Time	Elapsed Time in min.	$R = 1000(r-1)$	$R_w = 1000(r_w-1)$	Temp. in °C	$R-R_w$	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
13/10	4	45	-3	29							
	2	42		"							
	1	37		"							
	2	29		"							
	4	21		"							
	8	15.5		"							
	15	11		"							
	30	8		"							
10:26	60	6		"							
11:26	120	4.5		"							
11:26	240	3.0		30							
	5:26	480	2.0	"							
14/10	9:20 Am	1.5		29							
15/10	9:13 Am	1		30							
16/10	9:00 Am	0		30							

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Sieve Analysis

Job No.: _____

Container: 1320 / 9010

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 136

Wt. of Soil 100 gm

Sample No.: D-21, 22

Performed by:

Sample depth:

Date: 12/10/21

$$D_{|0} =$$

$$D_{30} =$$

$$D_{60} =$$

$C_u =$

$$C_z =$$

F.M. =

SF-394

Department of Civil Engineering, BUET

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 12/10/21

Tested by: _____

Location: _____

Boring No. : 136 Sample Depth. _____

Sample No. : D-21, 22

Determination No.			
Bottle No.		<u>26</u>	
Wt. of Bottle + Water + Soil W_1 in g		<u>384.9</u>	
Temperature T in °C		<u>30</u>	
Wt. of Bottle + Water W_2 in g		<u>353.1</u>	
Evaporating Dish No.		<u>22</u>	
Wt. of dish g		<u>251.9</u>	
Wt. of dish + dry soil g		<u>301.6</u>	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		<u>108.0</u>	
Wt. of Soil W_s in g		<u>49.7</u>	
Specific Gravity of Water G_T at T°C			
Specific Gravity of Soil: G_s			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

BH : 136

Date: 09/10/21

Sample: D-21, 22

Tested by:

Depth : 31.5, 33 M

Liquid Limit					
No. of Blows	15	20	24	28	31
Container No.	2311	888	887	717	162
Wt. Container, gm	9.94	7.03	7.15	7.22	6.97
Wt. Container + Wet Soil	43.19	46.24	41.55	43.62	42.66
Wt. Container + Dry Soil	33.76	35.41	32.17	33.72	32.95
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit					
Container No.	2110	2050	2021		
Wt. Container, gm	9.19	10.38	9.33		
Wt. Container + Wet Soil	44.75	46.66	49.70		
Wt. Container + Dry Soil	37.13	38.85	41.07		
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: _____
_____Test No.: _____
Date: 28/08/2021

Location: _____

Tested by: _____
Hydrometer No. 1527867452Boring No.: 137 Sample No. D-32,33

Meniscus Correction: _____

Sample Depth: 48.09, 49.5 MW_s in g 50Specific Gravity, G_s _____

R_n=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
29/8	4	44	-3	29							
	5	39			0						
	1	34.5			1						
	2	28			4						
	4	24.5			0						
	8	21.5			1						
	15	18			1						
	30	15.5			1						
	10:08	60	14.5		29						
	11:08	120	12		"						
	1:08	240	11		"						
	5:08	480	9.5		1						
30/8	9:21 Am	9			29						
31/8	8:53 Am	8			29						
1/9	9:28 Am	7			29						

Electrical Engineering Laboratory
Department of Civil Engineering, BUET

Never Analytics

Job No.: _____

Container: 1350/9014

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 137

Wt. of Soil 100.0 gm

Sample No.: D-92, n3

Performed by: _____

Sample depth: _____

Date: 28/08/21

D_{IC} =

$$D_{30} =$$

$$D_{60} =$$

$$C_{11} =$$

$C_1 =$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 28/08/21

Tested by: _____

Location: _____

Boring No.: 137 Sample Depth. _____Sample No.: D-32, 33

Determination No.				
Bottle No.		7		
Wt. of Bottle + Water + Soil W_1 in g		372		
Temperature T in °C		29		
Wt. of Bottle + Water W_2 in g		340.5		
Evaporating Dish No.		4		
Wt. of dish g		159.6		
Wt. of dish + dry soil g		209.3		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		91.9		
Wt. of Soil W_s in g		49.7		
Specific Gravity of Water G_T at $T^{\circ}\text{C}$				
Specific Gravity of Soil: G_s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

SL-394

Atterberg Limit Test

Soil Sample
D.H: 137

Test No.:

Date: 26/8/21

Sample: D-32, 33
Depth: 48, 49.5 M

Tested by:

No. of Blows	Liquid Limit				
	15	19	24	30	35
Container No.	2030	2138	2165	2241	2115
Wt. Container, gm	10.48	10.29	9.93	9.05	9.69
Wt. Container + Wet Soil	47.72	45.86	45.92	43.23	46.93
Wt. Container + Dry Soil	36.10	34.93	35.12	33.10	36.16
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	875	101	2215
Wt. Container, gm	7.21	7.44	9.16
Wt. Container + Wet Soil	44.39	47.69	45.88
Wt. Container + Dry Soil	37.50	40.29	38.41
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

FD

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

SL-394

Soil Sample: Mithamain

Test No.:

Date: 19/6/21

Tested by:

Hydrometer No. 152 H 867452Location: 1032

Meniscus Correction:

Boring No.: 139 Sample No. UD-1W_s in g 50.0 gmSample Depth: 2.10 - 2.55 MSpecific Gravity, G_s _____

RR=1

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
20/6	1/4	50	-4	28							
	1/2	48			27						
	1	44			"						
	2	40			"						
	4	26			"						
	8	18			"						
	15	12			"						
	30	8			"						
	10:44	60	7		27						
	11:44	120	5		28						
	1:44	240	4		"						
	5:44	480	3.5		"						
21/6	9:07 Am		3.0		27						
22/6	9:24 Am		3.0		"						
23/6	9:19 Am		3.0		28						



5L-394

New analysis

Job No.: _____

Container 1032 / 1121

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 139

Wt. of Soil 100.0 gm

Sample No.: UD-1

performed by _____

$$S = \text{to do} - 7 \times 10 = 7.55$$

19/06/2-1

Sample depth: 2.10 - 2.35

Date: 19/06/21

—

$D_{1G} =$

$$D_{30} =$$

$$D_{60} =$$

$$C_0 =$$

$$C_7 =$$

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

SL-394
Soil Sample: _____

Test No.: _____

Date: 20/06/21

Tested by: _____

Location: _____

Boring No.: 139 Sample Depth. _____Sample No.: UD-1

H. 1032

Determination No.			
Bottle No.		26	
Wt. of Bottle + Water + Soil W ₁ in g		384.9	
Temperature T in °C		27	
Wt. of Bottle + Water W ₂ in g		353.2	
Evaporating Dish No.		23	
Wt. of dish g		323.7	
Wt. of dish + dry soil g		373.3	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		105.0	
Wt. of Soil W _s in g		49.6	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _S			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_S _____

Cont: 1032

S.P. 394

Geotechnical Engineering Laboratory
Department of Civil Engineering, DUCET

Atterberg Limit Test

Soil Sample _____

B.H: 139

Sample: UD-1

Depth: 2.10 - 2.55 M

Test No.:

Date: 17/06/2021

Tested by:

Liquid Limit					
No. of Blows					
Container No.	2172	2204	2084	2073	2258
Wt. Container, gm	9.92	10.70	9.41	10.30	10.84
Wt. Container + Wet Soil					
Wt. Container + Dry Soil					
Wt. Water, W_w in gm					
Wt. Dry soil, W_d in gm					
Water content, W, in %					

Plastic Limit			
Container No.	2171	2135	2081
Wt. Container, gm	9.95	9.17	9.63
Wt. Container + Wet Soil			
Wt. Container + Dry Soil			
Wt. Water, W_w in gm			
Wt. Dry soil, W_d in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish,	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

Geotechnical Engineering Laboratory

HYDROMETER ANALYSIS

Soil Sample: Mithamain

Test No.: _____

Date: 19/6/21

Tested by: _____

Hydrometer No. 152H867452

Meniscus Correction: _____

W_s in g 50.0 gm

Location: _____

Boring No.: 140 Sample No. UD-1Sample Depth: 2.10 - 2.55 MSpecific Gravity, G_s _____

1227

RR = 1

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp. in °C	R-R _w	N in %	Z _r in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
20/6	Y ₁	46.5	-4	28							
	Y ₂	43.5		27							
	1	40		"							
	2	34		"							
	4	27.5		"							
	8	18		"							
	15	14		"							
	30	11.5		"							
10:36	60	9		27							
11:36	120	7		28							
1:36	240	5.5		"							
5:36	480	4.5		"							
21/6	9:05 Am	4.0		27							
22/6	9:24 Am	3.0		"							
23/6	9:17 Am	3.0		28							



bk 394

Sieve analysis

Job No.: _____

Container: 1227/1046

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

WT of Container: _____

Boring No: 140

Wt. of Soil 100.0 g m

Sample No.: 3 UD-1

Performed by:

Sample depth: 2.10 - 2.55 m

Date: 19/06/21

$$D_{1G} =$$

$$D_{30} =$$

$$D_{60} =$$

$$C_1 =$$

$\int_{\Omega} =$

$F_M =$

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

52/394
 Soil Sample: _____

Test No.: _____

Date: 20/06/21

Tested by: _____

Location: _____

Boring No.: 140 Sample Depth. _____Sample No.: UD-1

Determination No.				
Bottle No.		19		
Wt. of Bottle + Water + Soil W ₁ in g		370.4		
Temperature T in °C		27		
Wt. of Bottle + Water W ₂ in g		339.2		
Evaporating Dish No.		26		
Wt. of dish g		272.0		
Wt. of dish + dry soil g		321.6		
Wt. Bottle + Dry Soil in g				
Wt. of Bottle in g		91.2		
Wt. of Soil W _s in g		49.6		
Specific Gravity of Water G _T at T°C				
Specific Gravity of Soil: G _s				

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

cont No = 1227

SL-394

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

Atterberg Limit Test

Soil Sample _____

Test No.: _____

B.H : 140Date: 17/6/21Sample : UD-1

Tested by: _____

Depth : 2.10 - 2.55 M

Liquid Limit					
No. of Blows	15	20	26	30	35
Container No.	214	878	007	44	405
Wt. Container, gm	7.35	10.96	7.23	7.44	6.89
Wt. Container + Wet Soil	46.59	47.84	46.94	50.48	49.41
Wt. Container + Dry Soil	32.37	34.66	32.92	35.81	35.12
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Plastic Limit			
Container No.	786	707	144
Wt. Container, gm	10.94	7.42	7.28
Wt. Container + Wet Soil	48.93	41.62	46.01
Wt. Container + Dry Soil	39.03	32.58	35.97
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

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HYDROMETER ANALYSIS

SX-394Soil Sample: _____

Test No.: _____

Date: 31/08/2021

Tested by: _____

Hydrometer No. 152/867452

Meniscus Correction: _____

W_s in g _____Location: _____
Boring No.: 140 Sample No. D-27, 28
Sample Depth: 40.5, 42 MSpecific Gravity, G_s _____

R²=2

Date	Time	Elapsed Time in min.	R = 1000(r-1)	R _w = 1000(r _w -1)	Temp in °C	R-R _w	N in %	Z in cm	$\sqrt{\frac{Z_r \text{ in cm}}{t \text{ in min}}}$	D in mm	N
01/9	1	47	-3	29							
	2	44		"							
	1	41		"							
	2	36.5		"							
	4	31		"							
	8	27		"							
	15	22		"							
	30	18		29							
10:08	60	15		"							
11:08	120	12.5		"							
1:08	240	9.5		"							
5:08	480	8.5		29							
02/9	9:10 Am	7.5		29							
03/9	9:16	7.0		29.							
04/9	9:05 Am	6.5		29.5							



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Department of Civil Engineering, Biju P

New synthesis

Job No.:

Container: 629/1080

Soil Sample _____

Wt. of Container + Soil _____

Location: _____

Wt. of Container: _____

Boring No: 140

Wt. of Soil 100.0 gm

Sample No.: D-27,28

Performed by: _____

Sample depth: _____

Date: 31/08/21

D_{1C} =

$$D_{30} =$$

$$D_{60} =$$

$C_U =$

, C₂ =

F.M. =

Geotechnical Engineering Laboratory

SPECIFIC GRAVITY TEST

Soil Sample: _____

Test No.: _____

Date: 31/08/21

Tested by: _____

Location: _____

Boring No. 140 Sample Depth. _____Sample No. : D - 27, 28

Determination No.			
Bottle No.		<u>13</u>	
Wt. of Bottle + Water + Soil W ₁ in g		<u>397.3</u>	<u>296.8</u>
Temperature T in °C		<u>29</u>	
Wt. of Bottle + Water W ₂ in g		<u>365.2</u>	
Evaporating Dish No.		<u>19</u>	
Wt. of dish g		<u>286.2</u>	<u>285.7</u>
Wt. of dish + dry soil g		<u>335.4</u>	
Wt. Bottle + Dry Soil in g			
Wt. of Bottle in g		<u>117.1</u>	
Wt. of Soil W _s in g		<u>49.7</u>	
Specific Gravity of Water G _T at T°C			
Specific Gravity of Soil: G _s			

Remarks $\frac{G_T W_s}{W_s - W_1 + W_2}$ G_s _____

cont NO = 624

Mithamain

Geotechnical Engineering Laboratory
Department of Civil Engineering, BUET

SL-399

Atterberg Limit Test

Soil Sample

Test No.:

B.H.: @ 140

Date: 28/8/21

Sample: D-27, 28

Tested by:

Depth: 40.5, 42.0 M

Liquid Limit					
No. of Blows	15	20	25	30	35
Container No.	2257	2023	2227	2073	2033
Wt. Container, gm	9.77	10.11	10.20	10.40	10.90
Wt. Container + Wet Soil	44.14	42.57	42.25	42.00	47.29
Wt. Container + Dry Soil	36.88	35.83	35.77	35.69	40.18
Wt. Water, W_w in gm					
Wt. Dry sol, W_s in gm					
Water content, W, in %					

Grey
Silty
Clay(mix with
sand)

L+H

Plastic Limit			
Container No.	2123	200	850
Wt. Container, gm	9.54	7.29	6.97
Wt. Container + Wet Soil	45.63	49.09	45.94
Wt. Container + Dry Soil	40.19	38.55	40.10
Wt. Water, W_w in gm			
Wt. Dry sol, W_s in gm			
Water content, W, in %			

Shrinkage Limit test:

Dish No.	=	Wt. displaced mercury	=
Wt. of Dish	=	Volume of displaced mercury	=
Wt. Dish + Wet Soil	=	Vol. of dish	=
Wt. Dish + Dry Soil	=	Volume of dry soil pat	=
Wt. Dry Soil Pat	=	Shrinkage Limit	=

⑦

Result Summary:

Plastic Limit	Natural Water Content	Liquid Limit	Shrinkage Limit	B. Value	Plasticity Index	Flow Index	Toughness Index

Remarks:

