Data collection sheet

input material composition: ratio of input material by volume — PAGE 1

name: heap no.

date:

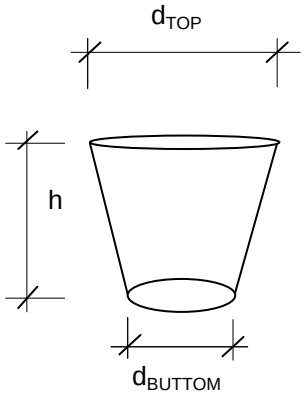
BUCKET

d_{TOP}	=	cm
d_{BUTTOM}	=	cm
h	=	cm

$$V_{BUCKET} = 0{,}196 * (d_{TOP} + d_{BUTTOM})^2 * h$$

V_{BUCKET}	=	cm^3
	=	m^3

($1m^3 = 1{,}000{,}000cm^3$)



PRE-TREATMENT

☐ yes

☐ no

piled waste by volume = m^3

(data collection sheet: total heap volume)

input material optical description [-]	numbers of buckets [-]	input material volume [m^3]	ratio input by volume [%]

(without pre-treatment no data's required)

$$imput\ material\ volume = numbers\ of\ buckets * V_{BUCKET}$$

Data collection sheet

input material composition: bulk density and total mass — PAGE 2

name: heap no.

date:

BUCKET m_{TARE} = kg

(TARE = weight of the empty bucket)

MOISTURE CONTENT: (MC) take a look at the data colletion sheet for the evaluation of the moisture content

Input material volume ⟶ page 1

$$bulk\ density = \frac{(mass1 + mass2 + mass3 - 3 * m_{TARE})}{3 * V_{BUCKERT}}$$

input material	mass			bulk density	MC	input mat.	ratio input
optical description	1	2	3			mass	by weight
[-]	[kg]	[kg]	[kg]	[kg/m³]	[% DS]	[kg]	[%]
mixed and pre-treated input material							

$$input\ mat.\ mass = bulk\ density * input\ material\ volume$$

input material composition: analysis PAGE 3

name: heap no.

date:

$$C/N\ ratio = \frac{C}{N}$$

N:
C:

input material	name	lab	total C	total N	C / N
optical description					ratio
[-]	[-]	[-]	[% DS]	[% DS]	[-]
mixed and pre-treated input material					

Data collection sheet

input material composition: ratio of input material by volume — PAGE 1

name: Hans Mustermann

heap no. 15

date: 14th January 2004

BUCKET

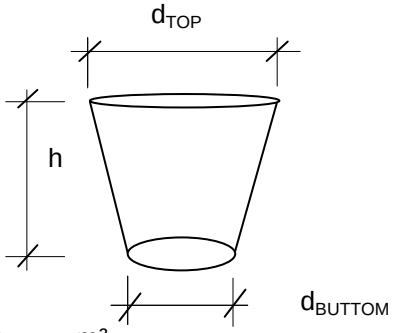
d_{TOP}	=	57	cm
d_{BUTTOM}	=	32	cm
h	=	38	cm

$$V_{BUCKET} = 0{,}196 * (d_{TOP} + d_{BUTTOM})^2 * h$$

V_{BUCKET}	=	59461	cm^3
	=	0,059	m^3

($1m^3$ = 1,000,000cm^3)

Step 1



PRE-TREATMENT

☒ yes

☐ no

piled waste by volume = 3,9 m^3

(data collection sheet: total heap volume)

input material optical description [-]	numbers of buckets [-]	input material volume [m^3]	ratio input by volume [%]
Step 1	Step 2		
Kitchen waste (vegetables)	52,0	3,1	34,3
garden waste (grass, leaves and hedge cuttings)	47,5	2,8	31,4
old structure material out of heap 1-7	52,0	3,1	34,3

$$imput\ material\ volume = numbers\ of\ buckets * V_{BUCKET}$$

Data collection sheet

input material composition: bulk density and total mass — PAGE 2

name: Hans Mustermann

heap no. 15

date: 14th January 2004

BUCKET m_{TARE} = 2,2 kg

(TARE = weight of the empty bucket)

MOISTURE CONTENT: (MC)

take a look at the data colletion sheet for the evaluation of the moisture content

Input material volume → page 1

$$bulk\ density = \frac{(mass1 + mass2 + mass3 - 3 * m_{TARE})}{3 * V_{BUCKERT}}$$

input material	mass			bulk density	MC	input mat.	ratio input
optical description	1	2	3			mass	by weight
[-]	[kg]	[kg]	[kg]	[kg/m³]	[% DS]	[kg]	[%]
Step 1	Step 3						
Kitchen waste (vegetables)	11,2	10,5	11,9	151	86,8	468	31,6
garden waste (grass, leaves and hedge cuttings)	7,0	6,2	5,2	66	43,8	187	12,6
old structure material out of heap 1-7	15,6	22,4	16,2	267	33,6	825	55,8
mixed and pre-treated input material	24,2	24,3	23,5	367	53,7	1430	

$$input\ mat.\ mass = bulk\ density * input\ material\ volume$$

input material composition: analysis — PAGE 3

name: Hans Mustermann

heap no. 15

date: 14th January 2004

$$C/N\ ratio = \frac{C}{N}$$

N:
C:

input material	name	lab	total C	total N	C / N
optical description					ratio
[-]	[-]	[-]	[% DS]	[% DS]	[-]
Step 1					
Kitchen waste (vegetables)	15 - 1	A.I.T. Bangkok	22,4	1,4	16,0
garden waste (grass, leaves and hedge cuttings)	15 - 2	A.I.T. Bangkok	46,0	1,2	38,3
old structure material out of heap 1-7	15 - 3	A.I.T. Bangkok	107,7	0,6	179,5
mixed and pre-treated input material	15 - 4	A.I.T. Bangkok	27,5	1,1	25,0

Data collection sheet

input material composition: ratio of input material by volume — PAGE 1

name: Hans Mustermann

heap no. 14

date: 7th January 2004

Step 1

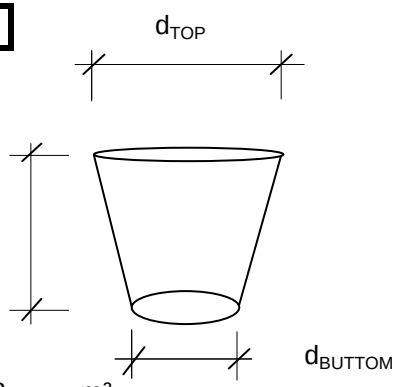
BUCKET

d_{TOP}	=	57	cm
d_{BUTTOM}	=	32	cm
h	=	38	cm

$$V_{BUCKET} = 0{,}196 * (d_{TOP} + d_{BUTTOM})^2 * h$$

V_{BUCKET}	=	59461	cm^3
	=	0,059	m^3

($1m^3 = 1{,}000{,}000cm^3$)



PRE-TREATMENT

☒ yes

☐ no

piled waste by volume = 4,8 m^3

(data collection sheet: total heap volume)

input material optical description [-]	numbers of buckets [-]	input material volume [m^3]	ratio input by volume [%]
Step 1	Step 2		
Kitchen waste (vegetables)	57,0	3,4	50,0
garden waste (grass, leaves and hedge cuttings; one week storage)	57,0	3,4	50,0

(without pre-treatment no data's required)

$$imput\ material\ volume = numbers\ of\ buckets * V_{BUCKET}$$

Data collection sheet

input material composition: bulk density and total mass — PAGE 2

name: Hans Mustermann

heap no. 14

date: 7th January 2004

BUCKET

m_{TARE} = 2,2 kg

(TARE = weight of the empty bucket)

MOISTURE CONTENT: (MC)

take a look at the data colletion sheet for the evaluation of the moisture content

Input material volume → page 1

$$bulk\ density = \frac{(mass1 + mass2 + mass3 - 3 * m_{TARE})}{3 * V_{BUCKERT}}$$

input material	mass			bulk density	MC	input mat.	ratio input
optical description	1	2	3			mass	by weight
[-]	[kg]	[kg]	[kg]	[kg/m³]	[% DS]	[kg]	[%]
Step 1	Step 3						
Kitchen waste (vegetables)	10,0	12,0	11,8	153,7	68,3	521,1	58,5
garden waste (grass, leaves; one week storage)	8,2	9,1	8,6	109,0	33,7	369,6	41,5
~~mixed and pre-treated input material~~							

$$input\ mat.\ mass = bulk\ density * input\ material\ volume$$

Data collection sheet

input material composition: analysis — PAGE 3

name: Hans Mustermann

heap no. 14

date:

$$C/N\ ratio = \frac{C}{N}$$

N:
C:

input material	name	lab	pH - Value	total C	total N	C / N
optical description						ratio
[-]	[-]	[-]	[-]	[% DS]	[% DS]	[-]
Step 1						
Kitchen waste (vegetables)	14 - 1	**central KU**		-	-	-
garden waste (grass, leaves;						
one week storage)	14 - 2	**central KU**		-	-	-
~~**mixed and pre-treated input material**~~						

Data collection sheet

input material composition: ratio of input material by volume — PAGE 1

name: heap no.

date:

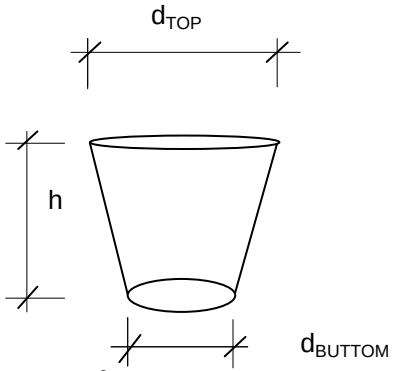
BUCKET

d_{TOP}	=	cm
d_{BUTTOM}	=	cm
h	=	cm

$$V_{BUCKET} = 0{,}196 * (d_{TOP} + d_{BUTTOM})^2 * h$$

V_{BUCKET}	=	cm^3
	=	m^3

($1m^3 = 1{,}000{,}000cm^3$)



PRE-TREATMENT ☐ yes ☐ no

piled waste by volume = m^3

(data collection sheet: total heap volume)

input material optical description [-]	numbers of buckets [-]	input material volume [m^3]	ratio input by volume [%]

(without pre-treatment no data's required)

Data collection sheet

input material composition: bulk density and total mass — PAGE 2

name: heap no.

date:

BUCKET m_{TARE} = kg

(TARE = weight of the empty bucket)

Input material volume → page 1

input material	mass			bulk density	MC	input mat.	ratio input
optical description	1	2	3			mass	by weight
[-]	[kg]	[kg]	[kg]	[kg/m³]	[% DS]	[kg]	[%]
mixed and pre-treated input material							

Data collection sheet

input material composition: analysis PAGE 3

name: heap no.

date:

C:
N:

input material	name	lab	pH - Value	total C	total N	C / N
optical description						ratio
[-]	[-]	[-]	[-]	[% DS]	[% DS]	[-]
mixed and pre-treated input material						