Experiment Details

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| Department Name | environmental |
| Class | T.Y.BTech |
| Semester | 5th |
| Subject Name | Solid waste management laboratory |
| Experiment No. | 01 |
| Experiment Name | Study of composition of solid waste by coning and quartering method |

Version History

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| --- | --- | --- | --- | --- |
| Sr. No. | Version Number | Created By | Approved By | Date |
| 1 | v1.0 | Abhishek Karmarkar | Faculty Name | 08/10/2020 |
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AIM:

To study composition of solid waste by coning and quartering method.

THEORY:

It is important to maintain the integrity of the given waste sample regardless of the odor and physical decay, to make sure that all the components are measured in this way. Some degree of randomness and unbiased selection is maintained.

PRE TEST:

1. Municipal Waste composed of ?
2. organic
3. hazardous
4. **all**
5. plastic
6. safety measures must be followed while handling municipal waste
7. **yes**
8. no
9. can’t say
10. maybe
11. segregation of the waste is important while performing the further processes ?
12. No
13. **Yes**
14. Maybe
15. None of the above
16. Hazardous waste is mixed with regular / general solid waste
17. **No**
18. Yes
19. Maybe
20. None of the above
21. Waste can’t be recycled
22. **No**
23. Yes
24. Maybe
25. None of the above

PROCEDURE:

1. Various points of the waste in order to have a representative sample, collect the waste from random points and ensure to cover the whole area while doing so.
2. Collect about 100 kg of sample and divide it into four parts, that is 25 kg each.
3. Select two diagonally opposite parts out of four and combine them to obtain a sample of 50 kg.
4. Further divide this 50 kg sample into 4 parts i.e. 12.5 kg each and again combine these two diagonally opposite 12.5 kg sample with resulting in 25 kg sample.
5. Repeat the same process on 25 kg sample such that we get one sample of 6.25 kg .
6. Now at last take two diagonally opposite 6.25 kg sample to get one 12.5 kg of sample.
7. Make use of this 12.5 kg sample to obtain the waste composition of a given sample.

|  |  |
| --- | --- |
| component | percentage |
| Compostable |  |
| Textile |  |
| Plastic bags |  |
| Paper |  |
| Plastic material |  |
| Glass |  |
| Other |  |
| Inert |  |
| Sanitary waste |  |
| Leather/rubber |  |
| metal |  |

POST TEST:

1. Organic waste found out in the sample is always high in quantity
2. Yes
3. No
4. **Can’t say**
5. Always
6. Composition varies according to the selection sites
7. **Yes**
8. No
9. Can’t say
10. None
11. Organic waste found out was at high percentage
12. **Yes**
13. No
14. Can’t say
15. None
16. Odor problem is experienced due to the decomposition
17. **Yes**
18. No
19. Can’t say
20. Maybe
21. Do you think that waste management was proper at the sites?
22. Yes
23. No
24. Can’t say
25. **At some sites**

REFERENCES:

T.Y.BTech Environmental Engineering Department , SWM lab manual.