



Biomass Storage Session

A stable, year-round supply of feed biomass is required for cost-effective manufacturing of renewable fuels and chemicals. Different feedstocks – corn grain, corn stover, switchgrass, wheat straw, sugarcane, sorghum etc. – have different compositions and harvest conditions, which affect their storage stability. Proper storage conditions must be established to preserve biomass quality. In this session, participants will get to see the different storage materials and methods first-hand and observe the properties of the chosen biomass. The students will learn about how moisture and exposure affect storage stability of different biomasses. They will then work within groups to pack and store a biomass to further study the effect of storage conditions.



Biomass Properties

Biomass type: _____

Storage type: Dry Aerobic

Moisture content value (%):

Before Storage: 1. _____ 2. _____ 3. _____

After Storage: 1. _____ 2. _____ 3. _____

Dry mass of biomass: It is calculated by subtracting the moisture (or water) mass from the initial total mass of biomass

Sample No.	Recorded Weight (g)				Dry mass of biomass (g)
	Before Storage		After Storage		
	Plastic Wrap	Biomass Loaded	Sample Total	Biomass	
1					
2					
3					
				Average	

pH test: pH can be determined using pH indicator.

Sample	Before storage p H	After storage p H	
1			
2			
3			
Average			

Biomass Properties

Biomass type: _____

Storage type: Wet Aerobic

Moisture content value (%):

Before Storage: 1. _____ 2. _____ 3. _____

After Storage: 1. _____ 2. _____ 3. _____

Dry mass of biomass: It is calculated by subtracting the moisture (or water) mass from the initial total mass of biomass

Sample No.	Recorded Weight (g)				Dry mass of biomass (g)
	Before Storage		After Storage		
	Plastic Wrap	Biomass Loaded	Sample Total	Biomass	
1					
2					
3					
				Average	

pH test: pH can be determined using pH indicator.

Sample	Before storage p H	After storage p H	<p style="text-align: center; margin: 0;"> NEUTRAL (Normal pH) ACID ALKALINE 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 SICKNESS HEALTH </p>
1			
2			
3			
Average			

Biomass Properties

Biomass type: _____

Storage type: Wet Anaerobic

Moisture content value (%):

Before Storage: 1. _____ 2. _____ 3. _____

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1			
2			
3			
Average			

Microbial activity:

Visually compare the microbial activity in your biomass samples before and after storage (i.e. 1 month)

Can you describe how your biomass sample is different?
