

P5-Experiment Procedure “Hygiene Swabs”

GENERAL INFORMATION

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SHORT EXPERIMENT DESCRIPTION

Students take samples from various surfaces (inside/outside of the helmet, inside/outside of cheeks, door handles, etc.) via hygiene swabs and analyze and count the bacteria caught with the swabs over the course of up to 48 hours


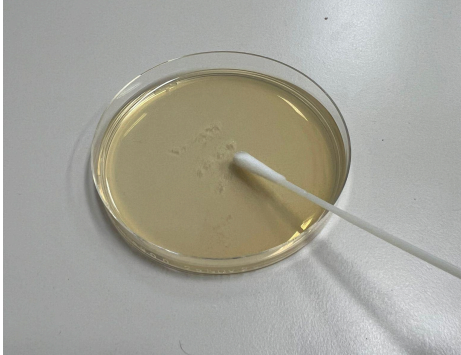
HARDWARE CHECKLIST

	Agar plates (x6) (keep between 8-18°C)
	Sterile swabs (x6)
	Waterproof marker
	Tape
	Cell phone

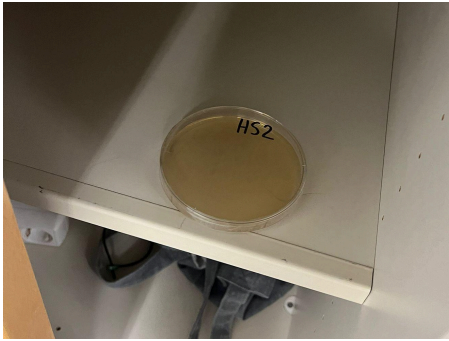
PROCEDURE "HYGIENE SWABS"

PROCEDURE

HYGIENE SWABS

Step	Action	NOTES	Duration	Check
1	Remove sterile swab from packaging and obtain samples from surfaces using the soft end of swab.	<p>*Suit must have previously been worn.</p> <p>*Total of 6 samples from inside of helmet, outside of helmet, interior door handle, exterior door handle, inside of cheek and outside of cheek.</p> 	15 min.	
2	<p>Transfer sample to agar plates by placing a tip of swab onto the agar plate and gently rolling across the plates.</p> <p>When done, close agar plates with lids and seal using 2 pieces of tape on either side.</p> <p>Write names of probes onto lids using format HS1-HS6</p>		2 min.	
3	Place agar plates in warm, dark area (temperature range 28°C-37°C) Let bacteria grow undisturbed for up to 48 hours	Document and analyze growth at regular 8-hour intervals using accompanying spreadsheet and photos.	48 h.	

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	<p>*Note: Do not unseal/open the samples when observing and recording data.</p> 		
<p>4 Note and Compare the data and determine most bacteria harvesting place</p>	<p>See the Data table below</p>	<p>10 min.</p>	
<p>5 Dispose of the samples according to local Biohazard protocol.</p>	<p>*Do not unseal/open the samples</p>	<p>5 min.</p>	

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Hygiene Swabs Experiment: Data Analysis Table

Sample ID	Surface Sampled	Observation Time (hours)	Growth Description (e.g., color, size, density, etc.)	Bacteria Count (approx.)	Notes (e.g., unusual features, contamination)
HS1	Inside of Helmet	0			
	Inside of Helmet	8			
	Inside of Helmet	16			
	Inside of Helmet	24			
	Inside of Helmet	32			
	Inside of Helmet	40			
	Inside of Helmet	48			
HS2	Outside of Helmet	0			
	Outside of Helmet	8			
	Outside of Helmet	16			
	Outside of Helmet	24			
	Outside of Helmet	32			
	Outside of Helmet	40			
	Outside of Helmet	48			

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HS3	Interior Door Handle	0			
	Interior Door Handle	8			
	Interior Door Handle	16			
	Interior Door Handle	24			
	Interior Door Handle	32			
	Interior Door Handle	40			
	Interior Door Handle	48			
HS4	Exterior Door Handle	0			
	Exterior Door Handle	8			
	Exterior Door Handle	16			
	Exterior Door Handle	24			
	Exterior Door Handle	32			
	Exterior Door Handle	40			
	Exterior Door Handle	48			
HS5	Inside of Cheek	0			
	Inside of Cheek	8			
	Inside of Cheek	16			
	Inside of Cheek	24			
	Inside of Cheek	32			
	Inside of Cheek	40			
	Inside of Cheek	48			
HS6	Outside of Cheek	0			
	Outside of Cheek	8			
	Outside of Cheek	16			
	Outside of Cheek	24			

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	Outside of Cheek	32			
	Outside of Cheek	40			
	Outside of Cheek	48			

Additional Notes

- Include a row for each observation time (e.g., 8-hour intervals).
- Use the "**Growth Description**" column to log qualitative observations (e.g., size, shape, or color of colonies).
- The "**Bacteria Count**" column should be an approximate number (e.g., estimated colony count or percentage of plate coverage).
- Keep the "**Notes**" column for any unexpected occurrences (e.g., contamination, plate damage).