



Oral Biofilms Lab Activity Sheet

1. Chew one dental disclosing tablet. Swish the chewed tablet/saliva for 30 seconds, then spit.
2. With a partner, use the Quigley Hein plaque index to quantify the amount of plaque on your and your partner's teeth. Make sure to observe an upper and lower incisor (your four front teeth), and upper and lower molar (your back teeth), and note differences between the buccal (cheek) and lingual (tongue) sides of these teeth. Write your observations on the data table in the column .

Quigley Hein Plaque Index:

- 0 – no plaque present
 - 1 – plaque is present along the gums, but only in small spots
 - 2 – plaque is present in a small (less than 1mm) band along the gum
 - 3 – plaque covers up to one-third of the tooth surface
 - 4 – plaque covers more than one-third of the tooth surface, but no more than two-thirds of the tooth surface
 - 5 – plaque covers greater than two-thirds of the tooth surface
3. Using a flat toothpick, gently scrape the pink area of one tooth to obtain a small amount of oral biofilm.
 4. Make a wet mount slide of the collected biofilm.
 - a. Place one drop of water in the center of your slide.
 - b. Rub your toothpick with biofilm on it in a circular motion in the water drop.
 - c. Place a coverslip on the slide by placing it at an angle, then dropping it down gently to avoid air bubbles.
 5. Using a new toothpick, gently scrape your cheek and make a wet mount slide of this sample.
 6. Clean your teeth according to your assigned method, and brush as you normally would without looking in a mirror or getting advice from a teammate. Brushing time should be 1 minute. Spit and rinse when done.
 - a. Mouthwash only
 - b. Toothbrush plus water only
 - c. Toothbrush plus toothpaste



7. Reevaluate the amount of plaque using the Quigley Hein plaque index, noting your results on the data table in the column labeled "after."
8. Brush your teeth thoroughly using your toothbrush plus toothpaste and brushing for a complete two minutes.
9. Observe your wet mount slides.
10. Draw and identify as much as possible. Note that you will be able to observe human cheek cells for comparison from the slide you made from your cheek.
11. Discuss your results with the class and answer the lab questions.