Simple Floatation and The Fecalyzer

Purpose:
Simple floatation and the Fecalyzer are the two most commonly used methods for identifying parasite eggs. They are performed routinely in all veterinary hospitals.

Objectives:
The students will be able to perform two of the most commonly used techniques for diagnosing parasitism and will be able to identify parasite eggs using a microscope.

Materials: NOTE: Always wear gloves when handling feces.
- Fecal samples
- Popsicle sticks
- Gloves
- Floatation Solution (Epsom salt and water)
- 2 Microscope slides and cover slips
- 1 Test tube
- 1 Fecalyzer kit
- 1 Waxed paper cup (Dixie cup)
- 1 Gauze square
- Test tube holder

Procedure:
Complete the set-up for the simple floatation first. Then do the Fecalyzer test set-up while waiting for the simple floatation to be ready for scanning.

**Simple Floatation Set Up**
1) While wearing gloves, obtain a fecal sample and place a penny size piece in the paper cup.
2) Add enough floatation solution to the cup to cover the sample and mix thoroughly until no large pieces remain.
3) Bend one side of the cup to form a spout and pour the mixture through the gauze into the test tube. Place test tube in stand.
4) Fill the test tube so that a dome of liquid (meniscus) is formed on the top of the tube. If there is not enough liquid to fill the test tube, add some fresh floatation solution to the mixture in the tube.
5) Place a cover slip gently on top of the tube so that it rests on the meniscus.
6) Leave the cover slip in place for 15 minutes. This allows time for the eggs to rise to the top and adhere to the cover slip.

**Fecalyzer Set Up**
1) While wearing gloves, obtain a fecal sample and place a penny size piece in the Fecalyzer cup.
2) Add enough floatation solution to the cup to cover the sample and mix thoroughly until no large pieces remain.
3) Attach the strainer to the Fecalyzer cup.
4) Add fresh floatation solution to the cup until a meniscus forms.
5) Place a cover slip gently on top of the tube so that it rests on the meniscus.
6) Leave the cover slip in place for 15 minutes. This allows time for the eggs to rise to the top and adhere to the cover slip.

**Preparing Slides for Scanning**

1) After the coverslip has been in place for 15 minutes, remove it from the test tube or Fecalyzer carefully by lifting it straight up. This will prevent eggs that have adhered to the slide from coming off.
2) Place the cover slip onto the slide at an angle to reduce air bubbles from being trapped under it.

3) Begin scanning the slide following the correct scanning pattern so that each area (field) is thoroughly examined.

In the circles below, draw and label any parasite eggs you find.

4. Draw and label three types of debris that are commonly seen under the microscope when examining a fecal sample.
Analysis/Conclusions:
1) What are the advantages of using the Fecalyzer as opposed to the simple floatation method?
   a) The Answer: The advantage to the Fecalyzer is that all the steps are done in one container making this method faster and easier than the simple floatation

2) Look at the slides of your classmates. As a class, what type(s) of parasites were seen most often?
   a) The answer: answers will vary

3) What conclusions can be drawn from this?
   a) The answer: answers will vary

4) Why do the eggs float to the top in the simple floatation and Fecalyzer?
   a) The answer: Eggs float to the top because they have a lighter specific gravity than the floatation solution.