

Name: _____

Date: _____

Discover Dairy and Milk Safety

Butter Lab Worksheet

Directions: Follow the lab procedure, then fill in the data for sections 1 to 4.

Lab Procedure

1. Weigh your jar (no lid). In your jar, add 1 cup of heavy cream. Weigh your jar again.
2. Place the lid and ring tightly. Take turns with your partner shaking the jar.
3. Open jar after every 3 minutes to look at what is happening.
4. Continue until the butter has separated from the remaining buttermilk.
5. Pour off buttermilk. Use a spoon and press into a solid ball. Pour off buttermilk again.
6. Weigh your butter and subtract from the original cream.
7. Rinse your butter in cold water and pat dry. Since it is unsalted butter, store in a refrigerator. Unsalted butter has a short shelf life because it contains no preservatives (salt). If you want, you can blend salt into your butter.

Directions: Record data and answer the questions below in the spaces provided.

1. Cream Weight _____ oz.

Butter Weight _____ oz.

Cream - Butter = Buttermilk

Buttermilk Weight _____ oz.

What percent of the cream was turned into butter? _____

2. What is the starting weight of the cream? _____

What is the weight of your butter? _____

What is the ratio of cream to butter (in fractions)? _____

Convert this fraction to a decimal (thousandth place). _____

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3. Theoretically speaking, it takes about 32 ounces of cream to make just one pound of butter.

What is the number of ounces in the cream? _____

How many ounces are in a pound of butter? _____

What is the ratio of cream to butter (in fraction)? _____

Convert this fraction to a decimal (thousandth place). _____

4. Using the information above, how does your experimental ratio compare to the theoretical ratio?