



FFDC's Pumpkin Hemp Heart Muffins – At-Home Resource

Approximate Activity Time: 45 minutes - 1 hour

Background

For the past 4 years, most middle and senior year's students that attend a 'From the Farm to Your Fork' program at the Bruce D. Campbell Farm and Food Discovery Centre have made this Pumpkin Hemp Heart Muffins recipe. It's become a staple recipe that teachers request repeatedly as their food activity during the field trip.

While there are quite a few ingredients, the recipe is very forgiving for errors making it the perfect recipe for bakers that are just beginning their baking adventures. We've decided to release this popular recipe and hope you enjoy!

How to use this resource

1. Have students complete the "Pre-Baking Questionnaire" and discuss your answers or read over them as a group and have an open discussion.
2. Follow the recipe and begin making your muffins
3. Check out the video on YouTube for some visual instructions:
https://youtu.be/R_w1Mg1CFAo
4. While the muffins bake, share the "Fun Food Science Facts" and discuss
5. Share the "Fun Farm Facts" and discuss. Maybe do this while you enjoy your fresh muffins!
6. Check out the "Complimentary Resource" section for some other fun facts!

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FFDC's Signature Pumpkin Hemp Heart Muffins

One recipe yields 12-15 muffins

Check out our video for step-by-step instructions: https://youtu.be/R_w1Mg1CFAo

Ingredients:

Wet Ingredients:

- 2 eggs (large)
- 250 mL (1 cup) granulated sugar
- 250 mL (1 cup) canned pumpkin
- 2.5 mL (½ tsp) vanilla extract
- 175 mL (¾ cup) of canola oil

Add ins:

- 50 mL (¼ cup) chocolate chips
- 50 mL (¼ cup) hemp hearts

Dry Ingredients:

- 375 mL (1 ½ cups) flour
- 5 mL (1 tsp) baking soda
- 5 mL (1 tsp) baking powder
- 5 mL (1 tsp) ground cinnamon
- 1 mL (¼ tsp) salt
- 1 mL (¼ tsp) ground nutmeg
- 1 mL (¼ tsp) cloves

Directions:

1. Preheat oven to 350°F.
2. Before cooking anything, always **sanitize your food prep area** (See “Complimentary Resource” section for a link to an easy and effective sanitizer) and **wash your hands** for 30 seconds.
3. In a medium mixing bowl, combine the wet ingredients.
4. In a separate large mixing bowl, combine the dry ingredients
5. Add the wet ingredients to the dry ingredients and mix by hand until combined. Do not over mix.
6. Fold in the add ins. *Note: if you don't have hemp hearts handy, why not add more chocolate chips or your favourite nut or seed!*
7. Line your muffin tins with parchment cups or grease the pan with oil.
8. Fill the muffin tin ¾ full. Make sure all the muffin cups are filled evenly.
9. Bake at 350F for 15-20 minutes. *Hint: Check on the muffins after 15 minutes by sticking a toothpick in the centre of one of the muffins. If it comes out clean, they are ready! If there is batter on the toothpick they need a few more minutes.*
10. Let the muffins cool, then enjoy!

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Fun Food Science Facts – Pumpkin Hemp Heart Muffin Edition

1. Sugar as a wet ingredient
 - It seems counter-intuitive that sugar is a wet ingredient when the texture is completely dry.
 - In baking, sugar is almost always added to the fat (butter or oil) along with the other wet ingredients. That's because we want the sugar to completely dissolve in the wet ingredients and incorporate well.
2. Egg Nutrition
 - Eggs are full of amazing vitamins, minerals and proteins
 - In fact, because eggs have all 10 essential amino acids (an essential mineral is one that we need to eat to absorb), we absorb the protein incredibly well. So well that eggs are often called "The Perfect Protein". Many other protein sources are compared to the egg
 - Eggs also contain: iron, Vitamins A, D, E, B12, folate, selenium, lutein and zeaxanthin, and choline. Check out what all these do for your body in the "Complimentary Resource" section.
3. Manitoba's Wheat is a Functional Food
 - A functional food is one that has better potential or ability to provide health-enhancing effects compares to similar foods.
 - Wheat grown in Manitoba has been shown to have higher nutritional properties than wheat grown elsewhere.
 - Manitoba grown wheat has protective antioxidants that are close to and in some cases higher than fruits and vegetables. The specific antioxidants are unique to Manitoba Wheat and are not found in any other foods.
4. Canola Nutrition
 - Canola is one of the most nutritionally balances fats available. It is low in saturated fats and high in unsaturated fats.
 - It is also affordable and has a mild taste that can be used in many recipes
 - Canola Oil is a great option for pan frying or deep frying because it has a high smoke point (the temperature that it starts to smoke) and flash point (the temperature that is catches fire).
5. Hemp is a Functional food
 - Hemp is also a functional food.
 - It is high in protein, healthy fats, fibre, iron, folate and magnesium
 - Hemp also has all 10 essential amino-acids making it a complete protein.

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Fun Farm Facts – Pumpkin Hemp Heart Muffin Edition

Thank a farmer for your delicious muffins! Many of the ingredients can be sourced locally! See the connections below:

1. Eggs

- Almost every egg you buy at the grocery store comes from a Manitoba Egg Farmer.
- These farm families work extremely hard to care for their hens and ensure they are safe, healthy and cared for properly. Not only is it the morally right thing to do, but it's the law. Livestock (animal) farmers MUST follow laws put in place to protect animals and they do a mighty job following those laws.
- There are 170 egg farms in Manitoba alone!
- Here are some Manitoba brands of eggs: Burnbrae, Countryside, Compliments brand, Co-Op Brand. Plus many more.

2. Canola oil

- Invented at the University of Manitoba from a plant called rapeseed. Dr. Baldur Stefansson and Dr. Keith Downey worked together to breed out an acid that humans could not digest.
- Canola stands for “Canadian Oil Low Acid”
- Manitoban farmers produce 17-18% of Canada's total Canola
- Canada produces the most Canola in the world
- Here are some Manitoba brands of Canola Oil: Canola Harvest, CanFarm Foods

3. Wheat flour

- Wheat is the most grown crop in Manitoba
- Manitoba farmers produce around 15% of all of Canada's wheat
- Here's a Manitoba brand of wheat flour: Manitoba Milling

4. Hemp Hearts

- Manitoba is home to 2 major industrial hemp processing plants: Hemp Oil Canada in Ste Agathe and Manitoba Harvest in Winnipeg.
- Here's a local brand of hemp hearts: Manitoba Harvest

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Complimentary Resources:

- Easy and Effective Sanitizer Mixture. Free download at: <https://bit.ly/2zyGu9b>
- AITC-MB's Food Gratitude Project. Free download at: <https://bit.ly/2zyGu9b>
- Egg Nutrition continued...According to Manitoba Egg Farmers, the nutrition in eggs can help with:
 - Iron - Carries oxygen to the cells; helps prevent anemia - the iron in eggs is easily absorbed by the body.
 - Vitamin A - Helps maintain healthy skin and eye tissue; assists in night vision
 - Vitamin D - Strengthens bones and teeth; may help protect against certain cancers and autoimmune diseases
 - Vitamin E - An antioxidant that plays a role in maintaining good health and preventing disease
 - Vitamin B12 - Helps protect against heart disease
 - Folate - Helps produce and maintain new cells; helps prevent a type of anemia; helps protect against serious birth defects if taken prior to pregnancy and during the first 3 months of pregnancy.
 - Protein - Essential for building and repairing muscles, organs, skin, hair and other body tissues; needed to produce hormones, enzymes and antibodies; the protein in eggs is easily absorbed by the body.
 - Selenium - Works with vitamin E to act as an antioxidant to help prevent the breakdown of body tissues.
 - Lutein and zeaxanthin - Maintains good vision; may help reduce the risk of age-related eye diseases such as cataracts and macular degeneration.
 - Choline - Plays a strong role in brain development and function

Outside sources that were referenced

- The Canadian Climate Advantage Diet by Manitoba Agri-Health Research Network
- Manitoba Egg Farmers <https://www.eggs.mb.ca/about-eggs/egg-nutrition#egg-nutrients>
- Food and Beverage Manitoba <https://foodbeveragemb.ca/membership/meet-our-full-members/>
- The Real Dirt on Farming <http://www.realdirtontfarming.ca/>

Check out our other resources available at
<https://bit.ly/2zyGu9b>

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