

## Pectin Gummy Recipe

Create Cellular Wafer:

1. Create Lecithin Mix:
  - a. Place 40g Soy Lecithin into 400mL mason jar
  - b. Add 60g of 85F alkaline water, close lid
  - c. Stir gently, place in pot of 110F water
  - d. Sit for 2 mins stirring gently
    - i. DO NOT OVERSTIR – NO WATER POOLING IS DESIRED
  - e. Let it sit in 110F bath
2. Create dosed infusion:
  - a. In separate 400mL Mason Jar, combine 10g extract with 60g ethanol
  - b. Heat until dissolved
  - c. Separate into 3 100mL glass spray bottles
    - i. Dilute 1 with 15g Ethanol and 5g MCT Oil
  - d. Fill another 100mL spray bottle with 15mL Alkaline Water
  - e. Fill another 100mL spray bottle with 15mL Ethanol
  - f. Prepare pot to heat all 5 100mL bottles
3. Check on Lecithin
  - a. 1 hr after creation, water should be absorbed
  - b. Uniform hydration with no dry spots desired
4. Reduce surface tension by introducing an alternating pattern of hot solvent and hot water
  - a. Heat MCT/Ethanol/Extract to 140F, ensuring extract is fully dissolved
  - b. Heat alkaline water to 140F
  - c. Heat Lecithin mix to 125F (water temp 150F)
  - d. Open Lecithin mix lid and give 5 spritz of alkaline water
  - e. Close lid and set for 2 mins
  - f. Open Lecithin mix and give 5 spritz of MCT/ETH/Extract
  - g. Close and let sit for 2 mins
  - h. Repeat until both bottles are empty
  - i. Cap, reduce heat (water temp 135) and let the jar sit for 30 mins
    - i. DO NOT SHAKE OR STIR
5. Observe for clarity
  - a. Full clarity must be achieved
6. Create 3-part Final Solution
  - a. Increase water temp to 145F
  - b. Observe Lecithin Solution
    - i. High pc = very little separation
    - ii. Standard Lecithin will yield 2 layers – pc on top, other phospholipids on bottom
  - c. Place 2 empty 400mL mason jars beside Lecithin mix

- d. Preheat an open tip syringe to 145F
- e. Slowly and carefully draw up half of the top layer of the lecithin solution
  - i. Avoid any foaming or aeration
- f. Inject into one of the empty jars and cap
- g. Increase water temp to 155F
- h. Gently swirl the 2-layer lecithin mixture until it is homogeneous
- i. Once homogeneous, remove half of this solution and carefully transfer to the other empty jar
- j. Close both jars and let all 3 sit for 10 mins to heat, settle, and remove bubbles
- k. Get another 100mL spray bottle and add 50mL standard pH water
- l. Place the standard water, and 3 other spray bottles into water to heat
- m. Heat for 10 mins
- n. Spray 5 spritz heated water onto the walls of the jar with only top layer & close lid
- o. Open the other 2 jars and spray 5 spritz ethanol on the walls of each. Reseal.
- p. Wait 2 mins for equilibriums to form
- q. Open top layer jar and spritz walls 5 times with an ethanol/extract bottle. Reseal.
- r. Open other 2 jars and spritz walls 5 times each with the other ethanol/extract bottle. Reseal.
- s. Wait 2 mins for equilibriums to form
- t. Repeat until bottles of ethanol/extract are empty
  - i. **Only done with 2 jars not containing top layer**
- u. Open top layer jar and add 5 spritz heated water to sides. Reseal.
- v. Wait 2 mins for equilibrium to form
- w. Re-open and add 5 spritz ethanol/extract. Reseal.
- x. Repeat until ethanol/extract bottle is empty
- y. Gently swirl to ensure homogeneity across all 3 jars. Increase water temp to 165F
- z. Pour all 3 jars into one, slowly, and place it back into the water.

Create Gummy Mix:

Things to keep in mind:

- Once Wafer mix is ready, keep closed air tight at 165F until ready for use
- Start the gummy process when 75% done with the wafer process
- Be sure to have a thick pot on a powerful burner
- Holding sugar between 210 and 220F for longer will remove more water, creating a firmer gummy
- Water content can be substituted for various fruit juices
- Pectin gummies “work” when a hydrated hot pectin is dissolved in sugar and introduced to an acid
- Hardness is controlled by the final temp of the sugar in the cooking process
- Springiness/bounce comes from the efficiency of the reaction of the pectin, and water content
- Introduction of Wafer liquid needs to be done carefully
  - Slowly with gentle stirring at the end of the process

- Final potency of the gummy is heavily dependent on how well the wafer mix settles into the gummy
- Pouring large gummy slabs and cutting afterwards is suggested – for max settling
- Never allow the mix to foam when being introduced
  - You will unavoidably see bubbling from the ethanol, but do not stir aggressively or introduce into any medium over 195F
- Do not manipulate the gummy mixture unless it is over 180F and completely liquid
- The Pectin/acid reaction takes 10-30 mins depending on acid quantity and gummy mix temp
  - Only liquid enough to manipulate for 2-3 mins
- If pouring into molds, do so very carefully to avoid aeration

Recipe: Makes 500 4mL squares

Sugar-1000g

Corn Syrup-1000g

Water-400g

Pectin-180g

Potassium Citrate-35g

Citric acid-10g

Flavoring

10 grams of most extracts, but it's up to you

Process:

1. In large Saucepan, combine corn syrup, sugar, and 1C water
2. Heat on low until sugar is dissolved, then crank to high
  - a. Target temp is 265F
3. In a separate saucepan with lid, mix water and Potassium Citrate on medium heat
  - a. Once boiling, mix in pectin
  - b. Stir until no clumps and put on low heat with lid. Stir occasionally
  - c. Keep above 145F but watch for burning on the bottom
4. In separate small saucepan, pour ¼ of the wafer mix and bring to 155F
5. In a separate container, dissolve citric acid in 20g water and heat to 175F
6. Gradually introduce the citric acid to the wafer mix while maintaining a temp of 165F
  - a. 1ml every 3 seconds
  - b. The mix will coagulate if citric acid is introduced too quickly
7. Once sugar reaches 265F, remove from heat and pour directly into the container with the pectin mix
8. Stir well and allow to cool to 195F
9. Add flavoring & stir
10. Slowly introduce the rest of the jar of cellular wafer mix into the gummy mix
  - a. Fold it in as it pours (do not stir)

11. Once entire wafer mix is poured, let it sit for 30 seconds before gently stirring the mixes together
12. Slowly pour and fold the citric acid into the gummy mix
13. Let sit for 30 seconds, then stir until homogeneous
  - a. Do not stir past homogeneity
14. Pour the gummies immediately and very gently to avoid any foaming and aeration
15. Gummy mix needs to stay 160F-180F for 15-30 mins after pouring
  - a. Pour onto heated surface (stainless steel)
  - b. Or pour then put in oven at 170F
16. Gummies will be hard enough to demold in 2 hours but fully set in 6-8 hours
17. Demold directly into sugar
18. Dehydrate at 100F for 3-5 days

\*Steps 16-18 can vary, based off preferences and environment\*