

~~Monday~~ October 6th 2025

- Attended Science Fair Interest meeting
 - learn dates
 - expectations

November 1st 2025

- Shortlisted criteria for what kind of topic I would like to choose

- Biology or Chemistry based

- Easy to start but also expandable complexity depending on the amount of time I want to spend.

- Solo project

- Experiment project based off of last years feedback would work best or me

November 2nd, 2025

- Finalized topic: Comparing Natural and Artificial Preservation
- easy access to materials
- budget friendly
- biology based project
- allows me to learn new things and apply pre-existing knowledge

November 3rd 2025

- Second Science Fair Meeting
- Filled out basic info form for teacher
- Reviewed last years project for flaws and what to avoid in order to build path for success this year.

~~11/29/25~~ November 29th 2025

- Logged onto C&SF portal for the first time this year.

December 1st, 2025

- Completed Basic project info and Ethics

Due Care Form

- Ran project idea through dad in order to ensure I would be able to conduct my experiment at home, and not have to keep slices elsewhere.

December 14th 2025

- Ethics done cure Born was accepted
by the CYSF

- Started short listing materials

- Apple slices

- petri dishes

- preservatives?

December 16th 2025

- Began researching types of preservatives

- Antimicrobial

- Antioxidants

- Knew salt would work as

one from childhood

experience with parents

putting salt on apple to reduce browning.

- Short listed preservatives

so far: Salt

Sugar

Lemon Juice

Citric Acid

Sodium Benzoate - First artificial preservative

December 20th 2025

- Finalized Materials list

- 1 organic apple

• salt

• sugar

• Lemon Juice

• Vinegar

• Sodium benzoate

• Potassium Sorbate

• Citric Acid

• Hones

• kitchen knife

• Water

• Bowls x 8

• Spoons x 8

• Tape

• Stop watch/phone

December 21st 2025

- Orders for materials were placed online

December 22nd - 30th 2025

- Materials Arrived

- Researched basic info on how exactly
the preservatives work, particularly the artificial
ones and kept brief notes in google doc

January 5th 2026

- Planned 1st draft of procedure with the usage of ordered materials.

- Revised the draft later in the evening and produced a final copy.

- Pasted copy of procedure into C/SR portal.

January 9th 2025

- Bought the organic apple that would be cut and placed inside the solutions and petri-dishes
- prepared all materials
- Followed procedure that had been pre-planned.
- Once all apple slices were placed in petri-dishes, I moved the table up to my room where it will sit for the remainder of the experiment.
- recorded weight of each apple slice.

Control: 18

Salt: 18

Sugar: 18

Honey: 14

Vinegar: 18

Lemon Juice: 18

Citric Acid: 18

Sodium Benzoate: 18

Potassium sorbate: 18

Brief Notes: Vinegar and Citric Acid already undergoing slight browning.

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January 10th 2020

Control: 18 Salt: 17 ~~Vinegar~~ Sugar: 18

Honey: 19 Vinegar: 18 Lemon Juice: 11

Citric Acid: 18 Sodium Benzoate: 18 Potassium Sorbate: 18

Brief Notes: Vinegar browned a bit more. Salt was the only preservative that saw a drop in weight. Control can be seen turning a little brown but hard to make a certain verdict.

January 11th 2020

Control: 17g Salt: 17g Sugar: 17g

Honey: 1g Vinegar: 1g Lemon Juice: 1g

Citric Acid: 1g Na⁺ Benzoate: 1g K⁺ Sorbate: 1g

Brief notes: Citric Acid & Vinegar continue to brown. Shrinkage can be visible in the vinegar coated apple slices. Same can be said about lemon juice. Very slight browning is also seen on sodium benzoate.

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January 12th 2020

Control: 17 Salt: 17 Sugar: 17

Honey: 18 Vinegar: 17 Lemon Juice: 17

Citric Acid: 18 Na⁺ Benzoate: 18 K⁺ Sorbate: 18

Brick Notes: Translucent/cloudy layer is formed on the ~~skin~~ top layer of the honey covered apple slice. Browning continues in sodium benzoate, vinegar & citric acid.

January 14th 2026

Control: 17

Salt: 16

Sugar: 16

Honey: 18

Vinegar: 17

Lemon Juice: 17

Citric Acid: 17

Na Benz: 17

K⁺ Sorb: 17

Brick Notes: All samples have now visibly
shrank a little bit, now addition
beats potassium sorbate

Completed presentation

January 13th 2020

Control: 17 Salt: less Sugar: 16.5

Honey: 19 Vinegar: 17 Lemon Juice: 17

Citric Acid: 18 Sodium Benzoate: 18 Potassium Sorbate: 18

Brief Notes: Browning continues to progress with the previously mentioned preservatives. Lemon juice has now shrunk to the same size as the vinegar.

- Worked on presentation for
teacher science fair show & tell.
Feedback session.

January 15th 2020

Control: 17

Salt: 6

Sugar: 6

Honey: 17

Vinegar: 6

Lenon Juice: 16

Citric Acid: 17

Na⁺ Benz: 17

K⁺ Sorb: 17

Brick Notes! Vinegar has shrunk quite a bit especially when compared to the starch left behind by its original shape. Became thinner
Sugar slice has started bending right

- Presented by project completion
so far to CYSF coordinator and
got feedback

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~~January~~ January 16th 2025

Control: 16 Salt: 16 Sugar: 16

Honey: 17 Vinegar: 16 Lemon Juice: 16

Citric Acids: 17 Nat Benz: 17 K⁺ Sob: 17

Brief Notes: Salt has become thinner Control
has shrivelled up a little bit. Despite Potassium
sorbates strong start it has now started
browning and is now shrunk smaller than
Sodium Benzoate.

January 17th 2028

Control: 68 Salt: 68 Sugar: 68

Honey: 17 Vinegar: 68 Lemon Juice: 68

Citric Acid: 68 Na⁺ Benz: 17 K⁺ Sorb: 17

Brief notes: Translucence that was observed earlier on in the experiment with the honey has become more potent & visible. Almost clear coating.

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January 18th 2028

Control: 6

Salt: 6

Sugar: 6

Honey: 7

Vinegar: 6

Lemon Juice: 6

Citric Acids: 6

Nat Benz: 6.5

K⁺ Sorb: 7

Brier Notes: Despite looking much smaller,
Potassium sorbate slice weighs more than the
Sodium Benzoate slices. Vinegar & Citric
Acid slices are now dark brown

January 19th 2026

Control: 16 Salt: 16 Sugar: 16

Honey: 17 Vinegar: 16 Lemon Juice: 16

Citric Acid: 16 Sodium Benzoate: 16.5 Potassium Sorbate: 17

Brief Notes: Shrinkage ~~can~~ now is now easier to see in honey. Sodium Benzoate remains largest size and vinegar the smallest. Slight breakage can be seen on the Lemon Juice slice.

January 20th 2020

Control: 6 Salt: 6 Sugar: 6

Honey: 17 Vinegar: 6 Lemon Juice: 6

Citric Acid: 6 Sodium Benzoate: 6 Potassium Sorbate: 17

Brief Notes: Bottom of control has shrivelled to the left. Sodium Benzoate remains best shape holder and as well as the least shrinkiest. Honey shrank a little bit more.

January 21st 2026

Control: 6

Salt: 6

Sugar: 6

Honey: 17

Vinegar: 6

Lemon Juice: 6

Citric Acid: 6

Na⁺ Benz: 6.5

K⁺ Sorb: 17

Brice Notes: No major standout changes. Regular browning continuing. ~~The~~ Bottom side of lemon juice has started to turn translucent like the honey.

January 22nd, 2020

Control: 6

Salt: 6

Sugar: 6

Honey: 17

Vinegar: 6

Lemon Juice: 6

Citric Acid: 6

Sodium Benzoate: 6

Potassium Sorbate: 6

Brief Notes/Final Notes: Lemon Juice saw more shrinkage and chinked inward. Citric Acid & Vinegar remain darkest with the most browning. Sodium Benzoate has performed the best overall. Honey held best mass. Salt saw least browning and only difference in shape was size. Sugar was a close second.

February 1st 2026

- Compiled all images taken or observations/pictures of experiment into a collage based on day. These will be used to put into CXSF portal under the observation category.

February 7th 2020

- Added preferential images to CVSP portal
- Created Data tables and entered data for each day into respective tables
- Created Bullet points on how each prescriptive changes over the course of fourteen days

February 12th 2026

- Rough draft of Analysis created in Google Docs
- Researched potential ways to link back to real life applications for application lab.

February 17th 2028

- Finished creating draft up ~~final~~ copy of analysis
- Began Conclusion rough draft
 - Talk about what works short term
and what works best long term.

February 27th, 2026

- Teacher Meeting

- Asked what Z should put in the application tab.

- Feedback on hypothesis

• More detailed

• Talk about variables in hypothesis

- Due date confirmed March 8th, 2026 8:00 AM

February 28th 2026

- Finished Conchata and transferred
to CYSR portal

- Double checked data with logbook to
ensure no mistakes were made when transferring
data.

- Filled in a few missing logbook entries.

March 2nd 2026

- Determined banner image
- Determined project image
- Began application writing

March 3rd 2028

- Completed application write to real life
- Proofread entire project
- Took photos for competitor photos
- Took pictures of logbook and created a PDF to upload to CYSF Portal