

Wheat Starch Paste Recipe for Paper Conservation

Equipment and Supplies:

- wheat starch powder (AYTEX-P or Zen Shofu)
- hot plate
- scoopula
- glass stirring rod
- graduated cylinder
- 500 mL beaker × 2
- beaker tongs
- hot pad
- distilled H₂O
- scale
- saucepan
- sieve and wooden paste paddle
- 50 mL beaker
- funnel
- eye dropper
- glass container with a plastic lid that has been sterilized (boiling water or EtOH)

Directions:

1. Add tap water to a saucepan (fill about half the pot, the beaker should be surrounded but not float or tip). Measure 250 mL of distilled H₂O in a graduated cylinder and add it to a 500 mL beaker. Place the beaker in the saucepan to create a double boiler, bring to a boil over medium high heat.
2. Meanwhile, weigh 30 g of starch powder on the scale and place it into a 50 mL beaker. In the graduated cylinder, measure 50 mL of distilled H₂O. Gradually pour the distilled H₂O into the 50 mL beaker, stirring continuously until all the lumps have dissolved and the mixture is smooth. Cover the mixture and let stand at least 10 minutes.
3. Once the water in the double boiler is boiling, stir the starch/water mixture and pour it into the boiling water in the beaker ≈ 25 mL at a time, stirring continuously as it thickens. When all the starch/water mixture has been added, continue heating and stirring for another 25-30 minutes until the paste turns silver/greyish. You will know it is done by performing the following test: place a drop of paste between your thumb and index finger, when you pull apart your fingers, the paste will be of a tackiness that the strand of paste will pull to about an inch or so before breaking.
4. Remove the beaker from the double boiler and let sit to cool on a hot pad ≈ 30 minutes.
5. Once the paste has cooled, strain through a sieve using a wooden paste paddle at least 5 times. Use immediately or store in a sterilized container for up to 7 days in the fridge. Stored paste must be put through a sieve again and thinned before it is used.