

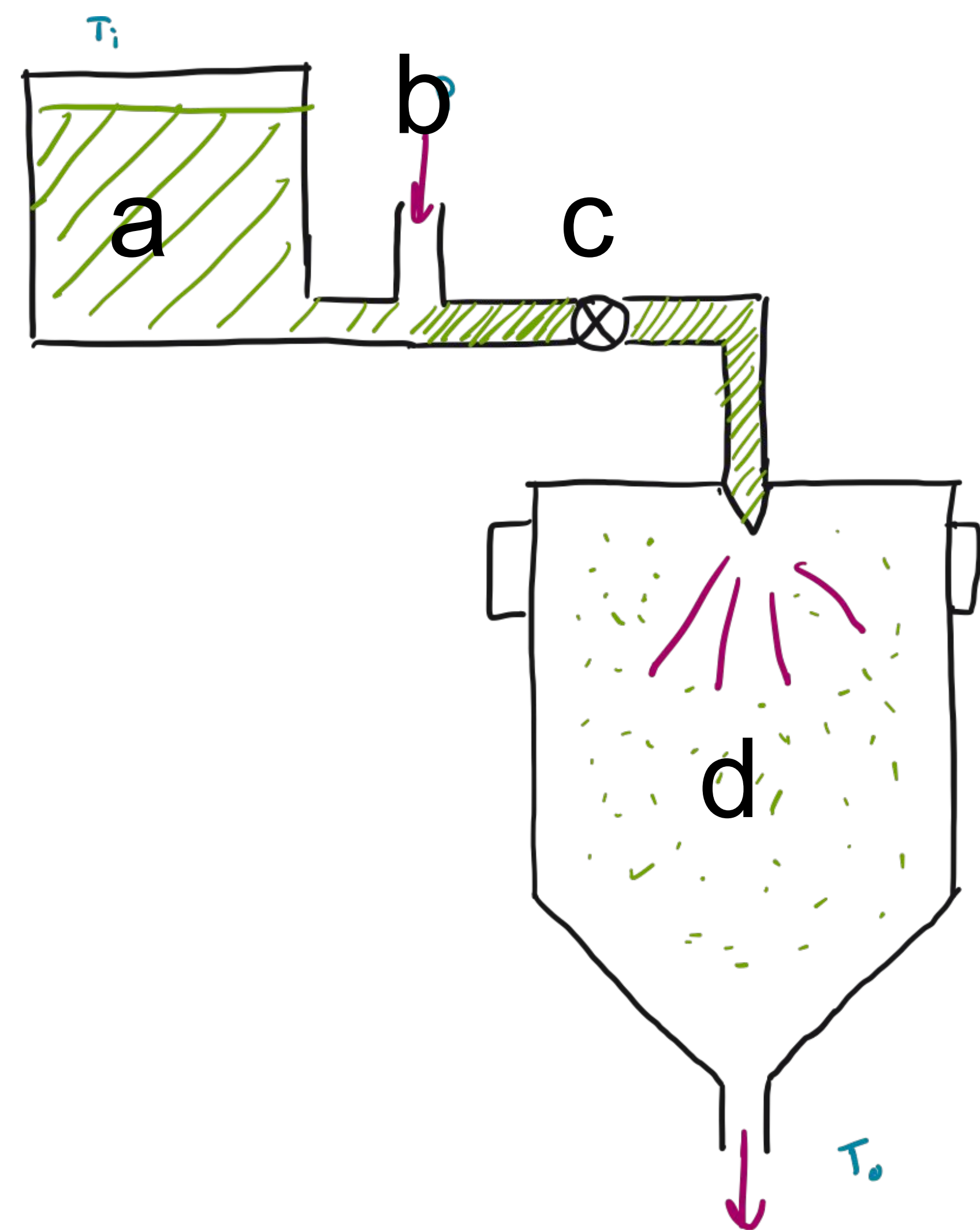
Dehydrating Mustard Seed Extract

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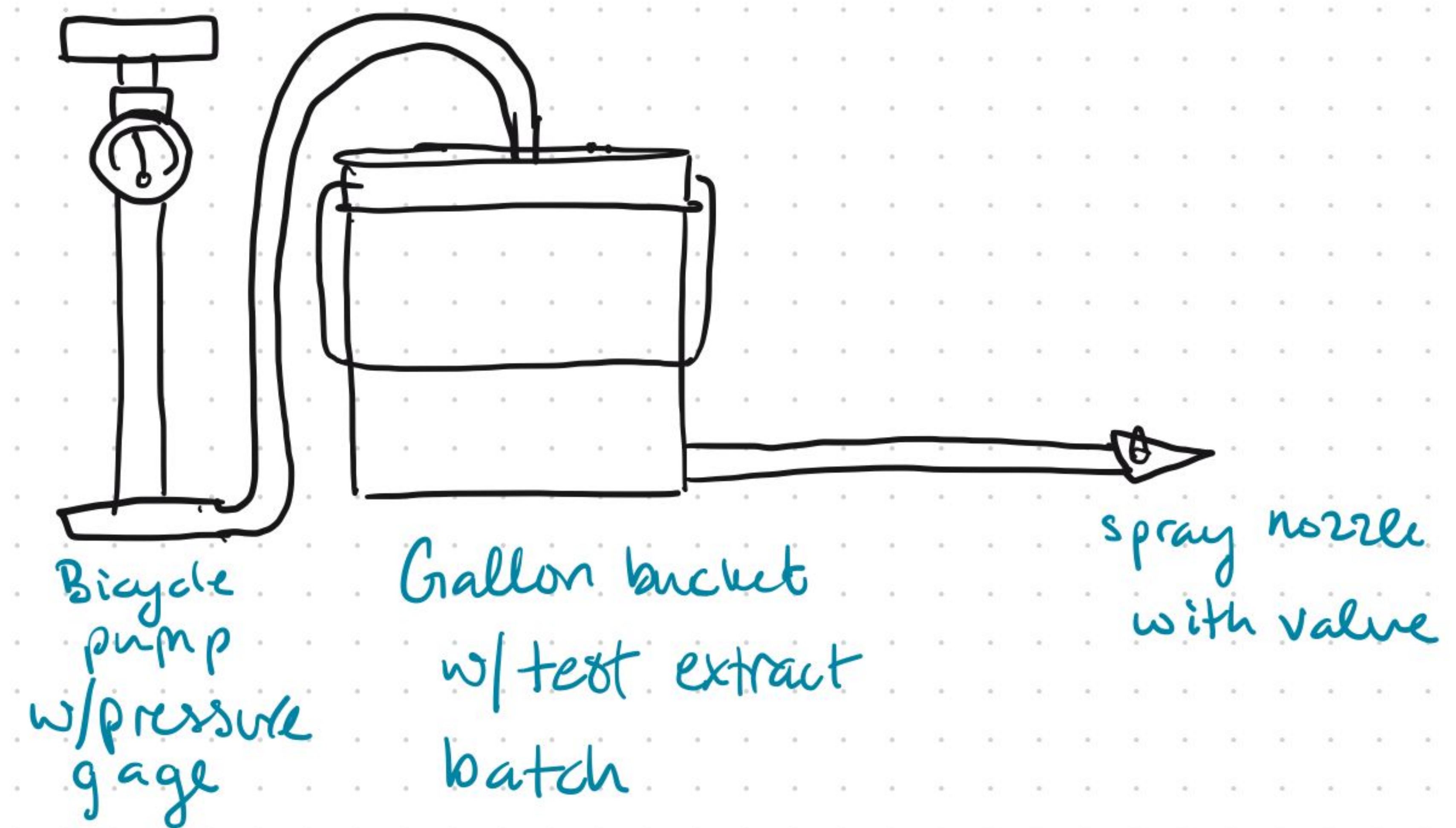
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System Design Concept



- a) Holding tank for extract solution
- b) Pressure input
- c) Check valve to control flow with pressure
- d) Evaporation chamber

System Pressure Testing for Nozzle flow



Goal

Develop a flash evaporator system that reduces the water content in a mustard seed extract slurry (MSES) by at least 50%.

Work up to this point

- Concept design of system
- Research into spray drying techniques currently available
- Collection of pressure testing materials

Scope

- Create misting system for MSES
- Maintain pressurized inflow of misted MSES
- Maintain evaporation chamber between 120°C and 150°C
- Collect dried content in storage container

Next steps

- Build pressure and nozzle testing device
- Evaluate system calculations
- Select necessary materials and their associated costs