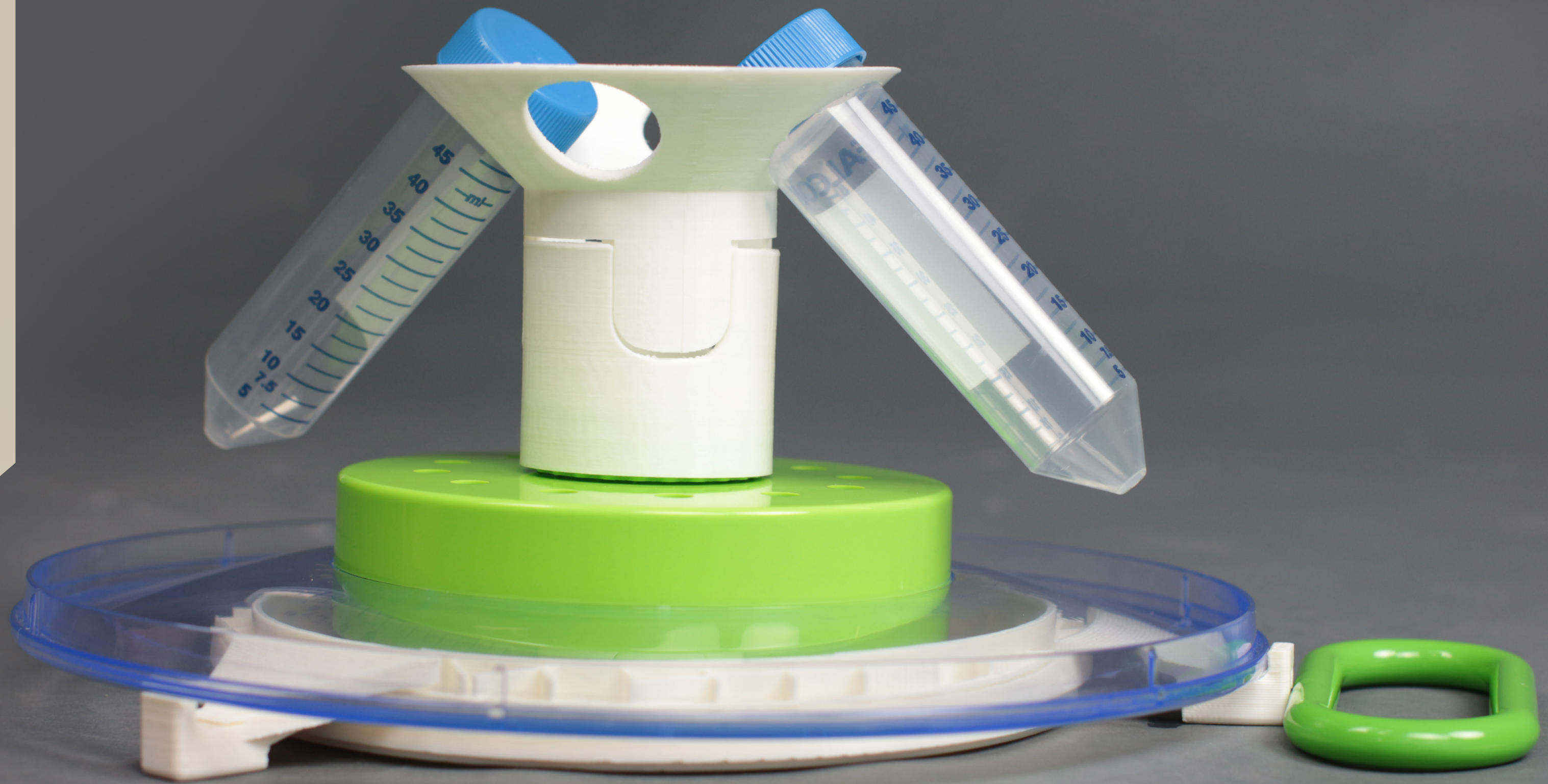


A MANUALLY OPERATED CENTRIFUGE

a partnership between the CDC and Georgia Tech

Problem Statement:

To design a manually operated centrifuge based off of the common salad spinner for international CDC laboratories that could be easily transported, stored and used with little technical expertise. The final solution must be usable in environments with no electricity and adaptable to various models of salad spinners



STAKEHOLDER ANALYSIS



photo courtesy of CDC.gov

By analyzing the conditions of the lab worker (the primary user) we were able to learn the final solution would need to be durable, designed for disassembly and easy to replace.

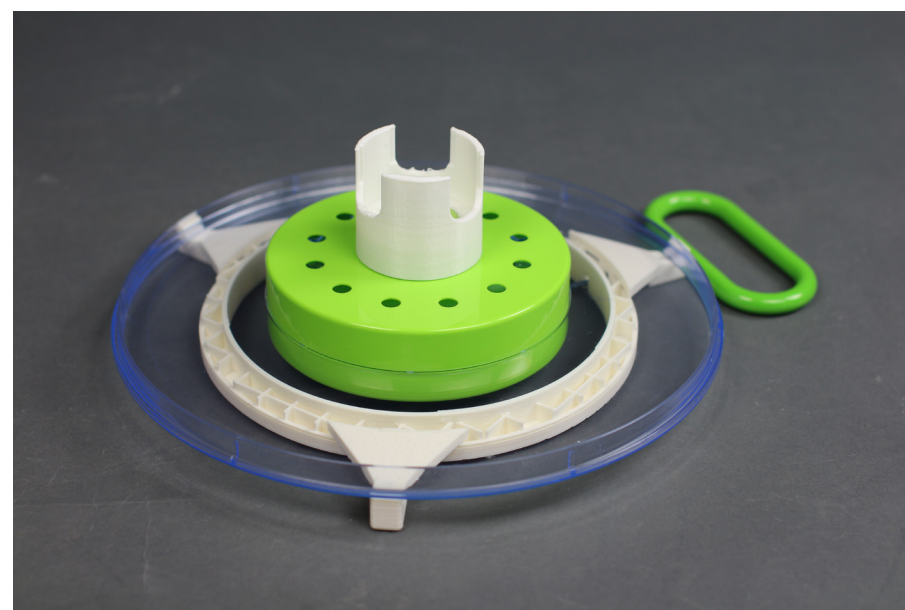


Considering Secondary (medical staff, relief worker, R&D) as well as tertiary stakeholders (government, donors, markets, manufacturers), we also took into consideration the economic scalability and capacity building the final design could exhibit.

USER PROCESS



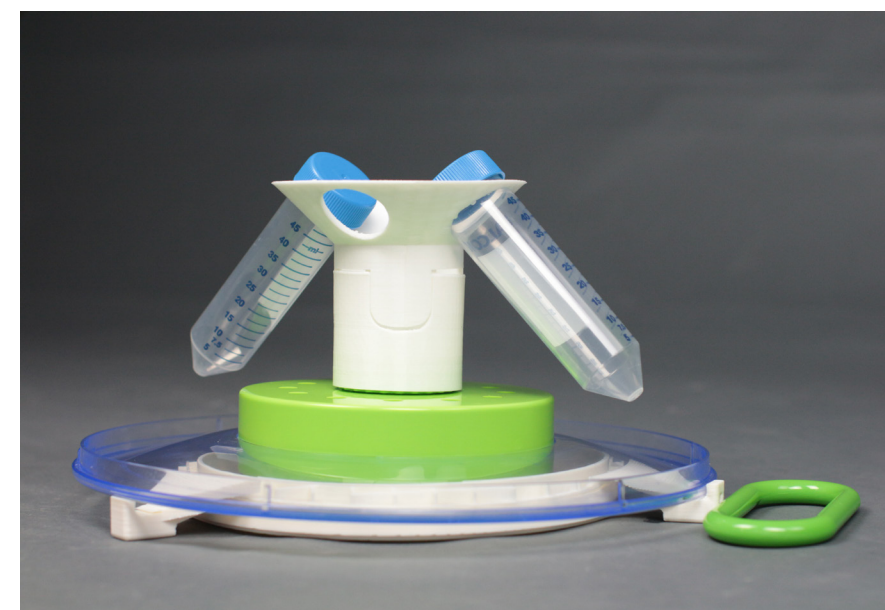
Step 1: Place salad spinner handle through 3D printed base unit



Step 2: Attach universal adapter to interior of the lid



Step 3: Attach custom printed tube or well plate holder



Step 4: Insert tubes or well plates



Step 5: Place the domed lid onto the unit and pull the cord to spin

VALUE ADD AND SCALABILITY

By utilizing 3d printing technology, parts can be easily reproduced, shipped and delivered. Additionally, its modularity provides little barrier to entry regardless of the technicians level of expertise. Finally, by being parametrically designed, future unites can be scaled to meet a range of salad spinner models.

