

LArFCS Cryogenic System Progress

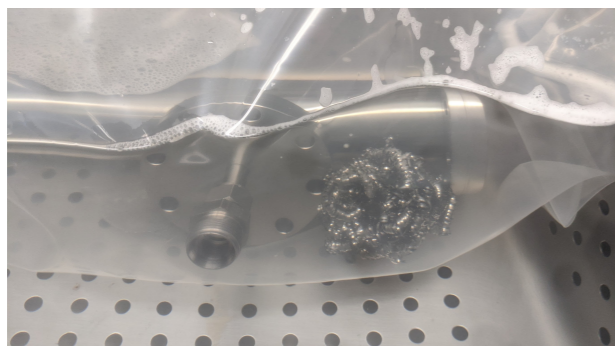
Yichen, Sergey

8/10/21

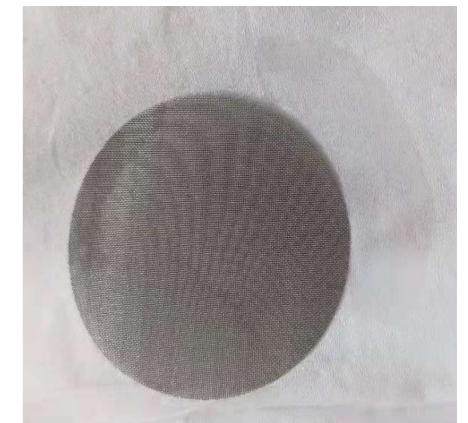
LArFCS Construction

► LArFCS purifier cleaning, Ultrasonic bath wash

- CMS approved the use of Citranox solution and waste disposal
 - 2.2% solution: 10ml Citranox+4.5L distilled water, bath heated up to 50 C
- Final Cleaning procedure:
 - Citranox solution ultrasonic wash for 30 mins, video: <https://www.youtube.com/watch?v=2X0JrbEWOEI>
 - Flush rinse with distilled water
 - Ultrasonic wash with 5 L distilled water for 25 mins
 - Flush with distilled water
 - Rinse in a bag of ~10 L distilled water
 - Air dry over night
- Cleanness significantly improved



Before



After

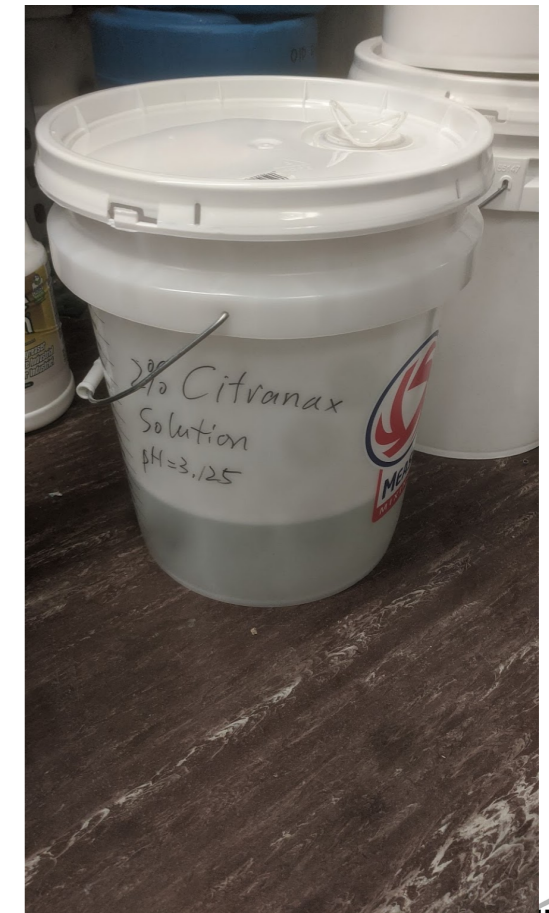
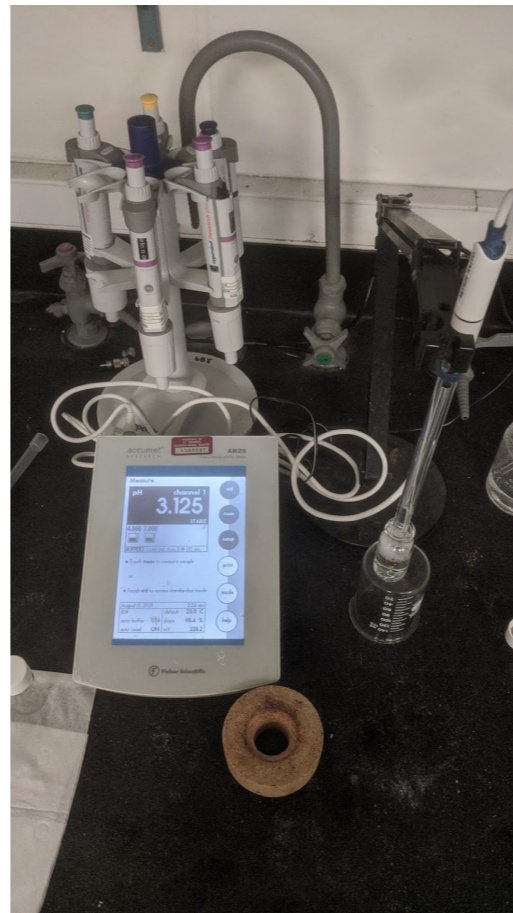
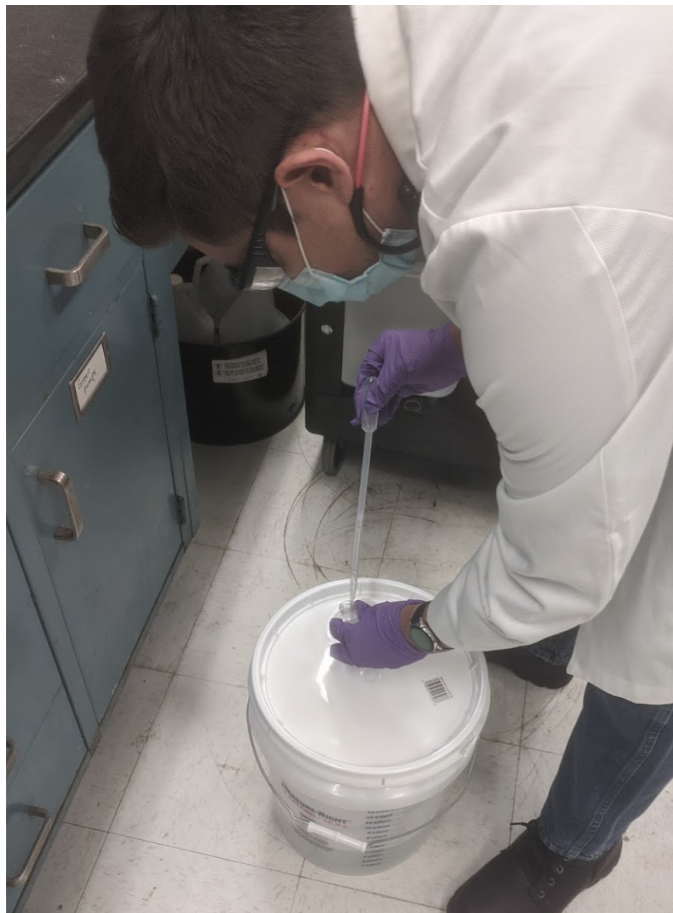


LArFCS Construction

► LArFCS purifier cleaning, Ultrasonic bath wash

- Chemical waste disposal

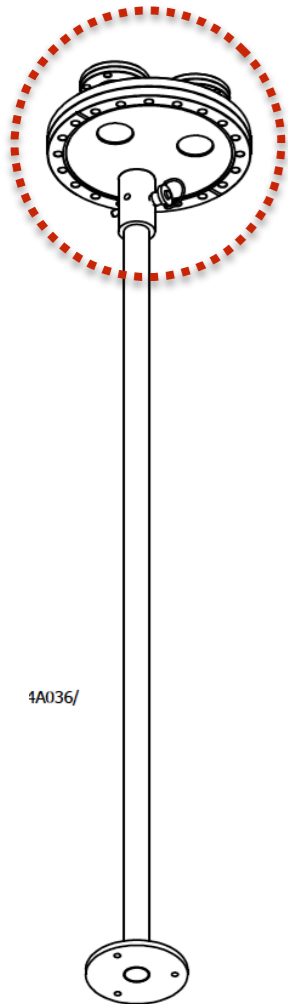
- The final production of Citranox solution is ~5 L
- Brought over to Minfang's lab for pH measurement, pH=3.125
- Not practical to dilute to pH of 6.0-9.0, troublesome to be neutralized by alkali (additional approval and evaluation for additional chemical)
- Disposed as industrial waste, moved to the 90-day area by the chemical safety rep.
- Covered by current ESR, no update needed



LArFCS Construction

▶ **LArFCS PrM Construction**

- PrM mount fabrication in progress at KHV
 - They are working on the top flange, expected end of next week
 - Visiting the shop today to check the progress
 - Less than a week for the rest parts
- PrM electronics and stacks
 - A student is refurbishing the drift stack
 - Electronics test is plan for next week
 - Expect the PrM and electronics back at early Sep.



6000-gallon LN2 tank comissioning

► Painting Work Order

- The painters started on Monday
- Pressure wash the tank yesterday
- Painting the first layer of coating, 3 layers of coating in total
- Expected to finish in ~2 weeks
- No access to the lab from the east side door
- Airgas site survey needs to be postponed after the painting

