بسم الله الرحمن الرحيم

AECENAR
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MEGBI

MEGBI/ASPIRIN Laboratory-Pilot plant 13/10/2023

ASPIRIN / lab part

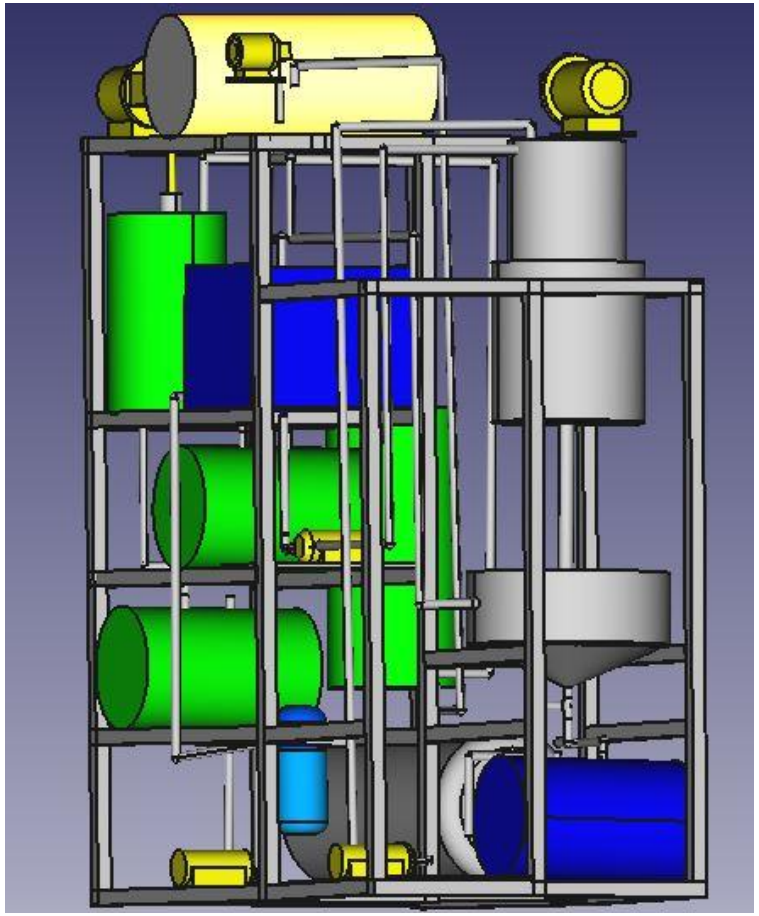
- Our Aspirin that’s produced in laboratory has a small amount of impurities (most probably : salicylic acid)
- Solution : Purification step should be more effective to remove the salicylic acid from the final product. Optimizing the conditions : like (the optimal Temperature and duration of the reaction)
- According to the melting point tester:

Commercial aspirin :
134-136 °C

MEGBI aspirin :
132-134 °C

Timeline : 2 days once we optimize the conditions.

ASPIRIN / Pilot plant part



Missing parts :

1- the reactor (small tank with heating/cooling system)
tank for ethanol
2- pumps (2 pumps and 1 vacuum pump) – PS : ready to be installed
3- Filter papers 60cm
4- One mixer
5- Acetic Anhydride stock (5L)
6- Cleaning products and equipment
7- Programing and electricity connections

Timeline:
1-2 months

Pilot Plant Scale Aspirin Production

Reagent	Quantity per cycle	Quantity ordered	Price	Reference				
Salicylic acid	1.013 Kg	2 Kg	101.64$	Biosynth	Alternatively	5 Kg	241.4$	Biosynth
Acetic anhydride	2.5 L	5 L	238.87$	VWR				
Sulfuric acid (we have 440ml)	30-40 ml	-	-	-				
Ethanol 50-70%	1L	5L	1L = 6$ 5L= 30$	Wissam ghieyh				
Filter paper 60cm	2 sheets per cycle	≈ 100 sheets	-					
Total			**370.51$** **Per cycle : 200.2$**					