

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

From the preceding chapter the results can be concluded as follow.

1. The optimum composition of unfilled sponge is use reacting mass consisting of 62.53 % of 10 % PVA solution of 64,500 molecular weight, 13.44 % of 37 % formaldehyde solution, 1.0 % of sodium lauryl sulfate and 23.03 % of 98 % sulfuric acid solution. The time for reaction and curing should exceed 18 hours. The above composition yield sponge having uniformly medium pore size is between 0.5 to 1.0 millimeters and uniform pore distribution.
2. The maximum quantity of activated carbon that can be added in the process of making the activated carbon-filled sponge is 6.25 % by weight of PVA solution. Thus the density of carbon-filled sponge was 0.043 g/cm^3 .
3. The PVA sponges produced in this work gave very little resistance to air flow. about 0.5-2.0 mmH₂O
4. The activated carbon-filled sponge can adsorb hexane as much as about 84 % of that adsorbed by activated carbon packed column of 3 millimeters in height.

RECOMMENDATIONS

In this study, PVA solution of 10 % concentration was used in the reaction mass. Thus, it is recommended that an exploratory study be carried out using PVA solution concentration other than 10 %.

Another recommended study is to included starch in reacting mass in order to reduce raw material cost.



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