Optimization Process Synthesis Activated Carbon from New Low Cost Precursor for Aluminum Removal by RSM

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Supplementary Data:

Figure S1 shows the raw I-DPF, I-DPF after grinded and sieved (size less than 1 mm) as well as I-DPF after activation (bio-PAC). The bio-fibre structure comprise from primary cell wall and other three secondary walls form the fibre complex layered structure whereas secondary thick middle layer of the cell walls consists of a series of helically wound cellular micro-fibrils formed from long chain cellulose molecules can determine the mechanical properties of fibre. Each cell wall is formed from three main components which are cellulose, hemicelluloses and lignin. Thus, cellulose and lignin are the most important structural components in date palm fibre due to existence of lumen, date palm fiber has a hollow structure unlike other parts.

![Figure S1](image_url)

**Figure S1.** (a) shows the raw I-DPF, (b) shows the I-DPF after grinded and sieved (size less than 1 mm) and (c) I-DPF after activation (bio-PAC).