

COMPARISON OF DIFFERENT ADSORPTION TECHNOLOGIES AND TECHNIQUES FOR THE PROCESSING AND TREATMENT IN FOOD AND DRINKING WATER INDUSTRY.

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ABSTRACT: In today's competitive industry environment, factories are spending more time and attention to improve their purification process and costs. This means energy, maintenance, environmental impact and chemical usage are constantly being measured and improved. As many industries have separation operations by adsorption as very important piece of the process, any inefficiency has a knock on an effect on operating costs. This paper studies and compares the main separation processes, namely GAC, Ion Exchange Resins and High Performance Adsorbents to demonstrate that the correct selection of the adsorption technology will make considerable difference regarding efficiency and costs of processing. The results of various processes are presented and compared taking as a case study the sugar industry and water treatment.

KEYWORDS: adsorption; cost; efficiency; water; sugar; treatment; GAC; IER; HPA