In order to evaluate the adsorptive capacities of granular activated carbon produced from coffee grounds by chemical activation, the adsorption of different phenols and acid and basic dyes, has been carried out. The comparison with a commercial activated carbon has been made. Adsorption isotherms of phenols and dyes (acid and basic) onto produced and commercial granular activated carbons were experimentally determined by batch tests. Both Freundlich [1] and Langmuir [2] models are well suited to fit the adsorption isotherm data. As a result, the coffee grounds based activated carbon may be promising for phenol and dye removal from aqueous streams