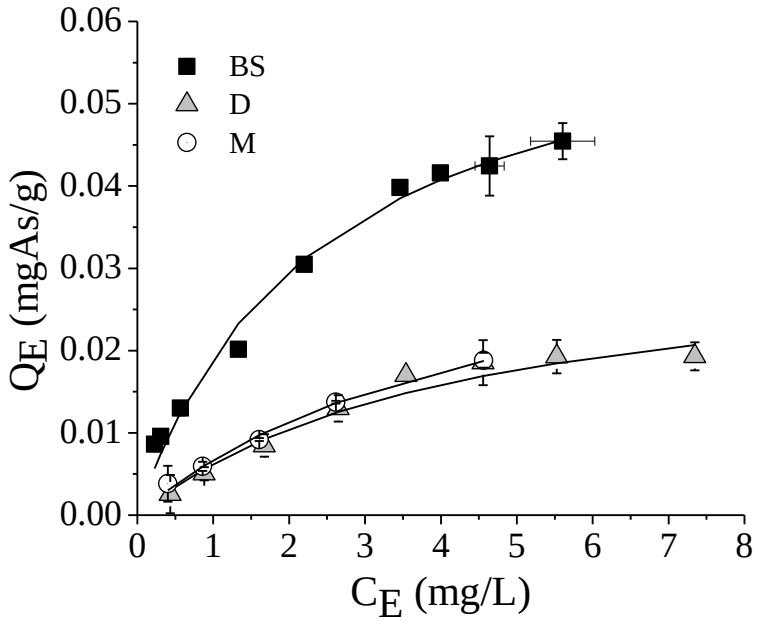


**Fig. 1** As(V) adsorption isotherms determined at 25ºC after 48 h in bottled water matrix with initial pH=8. Lines correspond to the Langmuir model. Error bars indicate the standard deviation of the experiments.

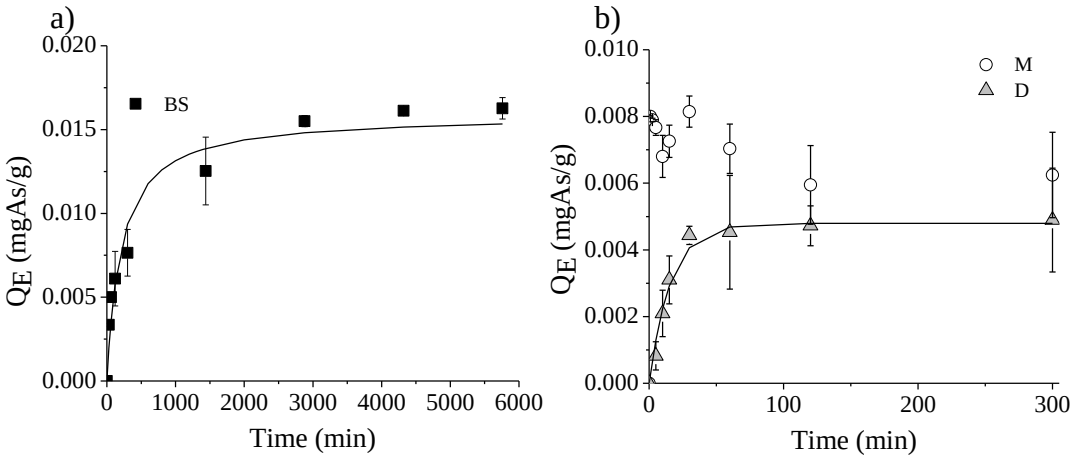


**Fig. 2** As(V) adsorption in bottled water matrix, kinetic curves ($C_0$=1 mg/L, 25ºC, $pH_0$=8): a) Black sand, b) Diatomite and Montanit300®. The kinetic curves correspond to the pseudo-first order model in the case of Black sand, and pseudo-second order model in the case of Diatomite. Error bars indicate the standard deviation of the experiments.

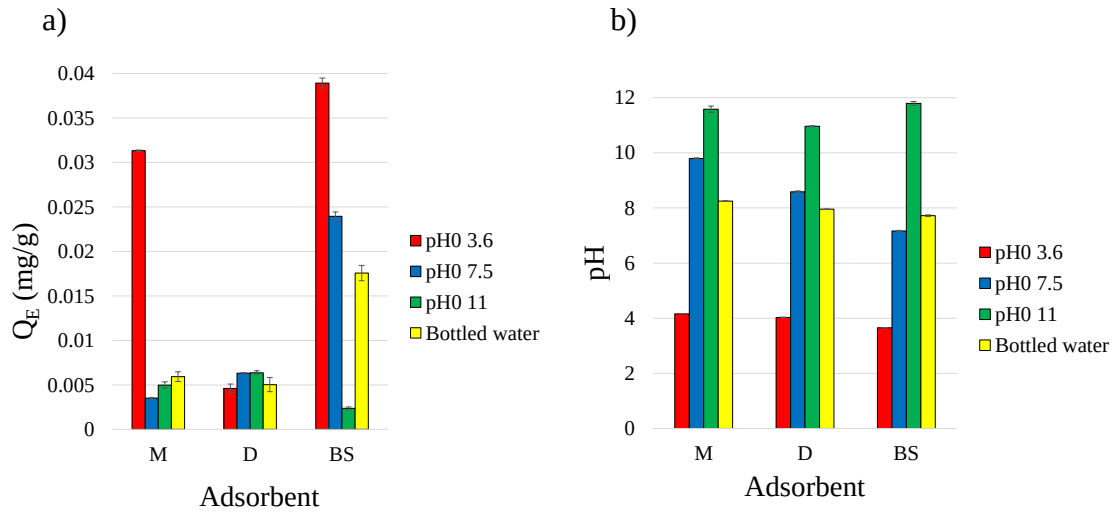


**Fig. 3** a) Adsorption capacity and b) final equilibrium pH of investigated adsorbents for As(V) removal. Experimental conditions: $C_0$=1 mg/L, 25 g/L of adsorbent, measurements carried out after 24 h (M and D) and 48 h (BS). Matrix: 0.02 M acetate buffer at $pH_0$=3.7, Milli-Q water at $pH_0$=7.5, 0.01 M NaOH solution at $pH_0$=11.5, and bottled water at $pH_0$=8. Error bars indicate the standard deviation of the experiments.

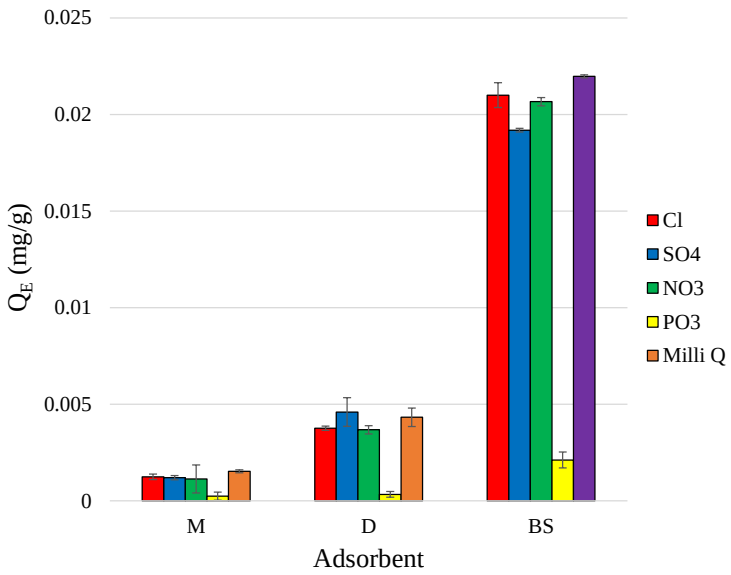


**Fig. 4** Anions interference effect on As(V) adsorption capacity ([As(V)]:[anion]$_{mol}$=1:25, T=25ºC, measurements were conducted after 24 h (M and D) and 48 h (BS)). Error bars indicate the standard deviation of the experiments.