CLAIMS

1. A method of adsorbing an anion of interest from an aqueous solution (A) containing the anion of interest and the other anion using an anion adsorbent, wherein the anion of interest is at least one selected from a phosphate ion, a phosphite ion, a hypophosphite ion, an arsenate ion, an arsenite ion, a fluoride ion, a selenate ion, an iodide ion and an iodate ion,
the method comprising performing at least the two following steps:

(1) a step of contacting the aqueous solution (A) having a pH of 5.8 or less with the anion adsorbent to allow the anion to be adsorbed to the anion adsorbent, and then

(2) a step of contacting an aqueous solution (B) containing the anion of interest and having a pH of 5.2 to 11 with the anion adsorbent to desorb at least a part of the other anion adsorbed to the anion adsorbent from the anion adsorbent.

2. The method according to claim 1, wherein a concentration of the anion of interest in the aqueous solution (B) is 5 ppm or more.

3. The method according to claim 1 or 2, further comprising performing after step (2),

(3) a step of contacting an aqueous solution (C) having a pH of 11.5 or more with the anion adsorbent to desorb the anion of interest from the anion adsorbent into the aqueous solution (C).

4. The method according to claim 3, further comprising performing after step (3),

(4) a step of regenerating the anion adsorbent,
wherein steps (1) to (4) are performed repeatedly.

5. The method according to claim 4, wherein step (4) is a step of contacting an aqueous solution (D) having a pH of 2 to 5 with the anion adsorbent.

6. The method according to claim 1 or 2, wherein the aqueous solution (A) contains at least one selected from a sulfate ion and a nitrate ion as the other anion.

7. The method according to claim 1 or 2, wherein a mass ratio (total amount of the anion of interest)/(total amount of the other anion) in the aqueous solution (A) is 0.01 or more.

8. The method according to claim 1 or 2, wherein the anion adsorbent comprises iron oxyhydroxide as an adsorbing component.

9. The method according to claim 8, wherein the iron oxyhydroxide is ß-iron oxyhydroxide.