# CLAIMS

1. Method for detecting the presence of boron in water integrated into a water treatment process comprising the production of a conductive buffer solution comprising the water comprising boron to be detected and at least one boron complexing agent, the continuous introduction into an electrochemical cell of said solution in the presence of at least one work electrode (7), and the measurement of an anodic peak of the boron complex and complexing agent by voltammetry, the height of the anodic peak being related via a calibration curve, to the concentration of boron, said method being characterized in that the work electrode (7) is a solid microelectrode, and in that the measurement is carried out continuously with respect to the flow of solution ~~water~~.

2. Method according to the preceding claim such that the voltammetry measurement is a Differential Pulse Voltammetry (DPV), or a Square Wave Absorptive Stripping Voltammetry Method (SWASVM), or an Absorptive Stripping Voltammetry Method (ASVM) measurement.

3. Method according to any one of the preceding claims such that the boron complexing agent is at a concentration of $10^{-9}$ M to $10^{-3}$ M, preferably $10^{-8}$ M to $10^{-4}$ M.

4. Method according to any one of the preceding claims such that the boron complexing agent chosen from the group formed by Alizarin Red S (or ARS, (3,4-dihydroxy-9,10-dioxo)-2-anthracenesulphonic) acid sodium salt) and beryllium (III).

5. Method according to any one of the preceding claims such that the work microelectrode (7) is chosen from carbon microelectrodes,

bismuth microelectrodes, boron-doped or non-doped diamond microelectrodes, and microelectrodes coated with a mercury film.

6. Method according to any one of the preceding claims such that the boron concentration measurement is calibrated as a function of the anodic peak height with a solution without boron and with at least one solution at a known concentration of boron.

7. Method according to the preceding claim such that, after calibration, the boron is able to be detected at a concentration of at least 5 ppb, generally from 5 to 1000 ppb, preferably from 5 to 400 ppb.

8. Method according to the preceding claims wherein it is carried out downstream of a stage of deionization on a resin bed.

~~8. Detection device (10; 20) for the implementation of a method according to any one of the preceding claims, characterized in that said device (10; 20) comprises an electrochemical cell comprising a liquid inlet means (3; 13) and a separate liquid outlet means (4; 14), the cell comprising moreover a cell tightness means and a reference electrode, a counter electrode and a work microelectrode (7A, 7B, 7C; 17A, 17B, 17C), said work microelectrode (7A, 7B, 7C; 17A, 17B, 17C) being able to be introduced in the electrochemical cell in the presence of a conductive buffer solution comprising water and at least one boron complexing agent, and said work microelectrode being chosen from the carbon microelectrodes, bismuth microelectrodes, boron-doped or non-doped diamond microelectrodes, and microelectrodes coated with a mercury film, said device (10; 20) being able to measure an anodic peak of the boron complex and complexing agent by voltammetry, and to carry out this measurement continuously with respect to the flow of water.~~

~~9. Detection device (10; 20) according to the preceding claim, said device comprising moreover a means of processing the signal (9;19)~~

~~picked up by the work electrode (7; 17), said processing means preferably comprising a means for measuring the boron concentration of the liquid present in the cell.~~