

METHOD FOR DETERMINING DISSOLVED-HYDROGEN CONCENTRATION

【ABSTRACT】

[Problem] To provide a method for determining the concentration of dissolved hydrogen in an aqueous solution. [Solution] The present invention is a method for determining the concentration of dissolved hydrogen in an aqueous solution by gas chromatography, the method being configured of: a gas control step in which a carrier gas that differs in thermal conductivity from hydrogen by a given value is chosen, and the flow rate thereof is controlled; a sample introduction step in which an aqueous solution sample is prepared and the prepared aqueous solution sample is introduced into the carrier gas serving as a mobile phase and which is characterized in that the preparation of an aqueous solution sample comprises injecting a desired amount of an aqueous solution sample into a vessel, the inside of which is kept vacuum, to thereby conduct gas-liquid separation and collecting the gas-phase portion as a sample to be introduced; a separation step in which the hydrogen is separated from the aqueous solution sample on the basis of an adsorption/distribution equilibrium between the aqueous solution sample introduced into the mobile phase and the fixed phase of the column; a detection step in which the separated hydrogen is detected by a thermal-conductivity detector; and a data processing step in which the acquired data is processed.

FIG. 1