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(54) **Detection method using electromagnetic wave and detection apparatus**

(57) A detection apparatus includes a sample holding section, an irradiation means, a detection means, a calculation means, and an evaluation means. The irradiation means irradiates a substance held in the sample holding section with a THz wave. The detection unit detects a THz wave passed through or reflected from the substance. The calculation unit determines a frequency dependence of a property of the substance with respect to the irradiated THz wave and then calculates a slope of a straight line or a slope of a straight line obtained by straight-line approximation of the frequency dependence of the property of the substance. The evaluation unit evaluates the state change of the substance by comparing a previously-obtained slope of a straight line of the frequency dependence of the property of the substance in a standard state and the slope of the straight line of the substance calculated.

FIG. 1

