

followed by a GC/MS measurement by the EI method for the same or a different sample.
[0024]

Accordingly, as another mode of the gas chromatograph mass spectrometer according to the present invention, the analysis controller may be configured as follows:
5 before or during an execution of an analysis of one sample under the ionization by the chemical ionization method, the analysis controller recognizes the ionization method to be used in another analysis to be performed subsequently to the analysis of the one sample, if such a subsequent analysis is present, and controls the reagent-gas supplier to discontinue the supply of the reagent gas into the ionization chamber and/or controls the thermion generator
10 to discontinue the generation of thermions no later than the completion of the analysis of the one sample under the ionization by the chemical ionization method in the mass spectrometer, if the ionization method to be used in the subsequent analysis is the electron ionization method, or if there is no subsequent analysis to be performed after the analysis of the one sample.

15 [0025]

According to this configuration, for example, before or during the execution of an analysis of one sample under the ionization by the CI method in a continuous analysis, the analysis controller recognizes the ionization method which is set as one of the analysis conditions to be used in the subsequent analysis. If the subsequent analysis is an analysis
20 under the ionization by the EI method, which is an ionization method that does not require the reagent gas to be introduced into the ionization chamber, the analysis controller controls, for example, the reagent-gas supplier to immediately discontinue the supply of the reagent gas into the ionization chamber when the analysis of the one sample under the ionization by the CI method in the mass spectrometer has been completed, i.e. when the ionization of the reagent gas
25 in the ion source has been unnecessary. On the other hand, if the current analysis is the last one in

should be energized, when the next analysis is initiated in the mass spectrometer 2. If the ionization method used in the currently performed analysis is the CI method and this analysis is the last one in the continuous analysis, i.e. if there is no more analysis scheduled, the valve 214 should be closed to discontinue the supply of the reagent gas into the ionization chamber 211, and the filament 212 should be deenergized, as soon as the analysis currently performed in the mass spectrometer 2 is completed.

[0058]

Consider a continuous analysis in which n analyses, from “Analysis 1” to “Analysis n”, are scheduled to be sequentially performed, as shown Fig. 5, where the ionization by the CI method is set in the first and second analyses, while the ionization by the EI method is set in the third analysis. In this case, the reagent gas is supplied into the ionization chamber 211 from the point in time where the first analysis is initiated in the mass spectrometer 2, to the point in time where the second analysis is completed. The supply of the reagent gas is discontinued as soon as the second analysis is completed. The supply of the reagent gas is also discontinued as soon as the last analysis in the continuous analysis is completed.

By such a control, the total length of time during which the reagent-gas ions are generated within the ionization chamber 211 can be more certainly reduced, so that the adhesion of the reagent-gas ions to the inner wall of the ionization chamber 211, repeller electrode and other locations can be reduced.

[0059]

A similar control to the previously described one can be performed not only in a series of continuous analyses but also in the case where a plurality of individual analyses set by the user are successively performed according to a specified schedule.

[0060]

It should be noted that any of the previous embodiments is a mere example of the

- 31... Chromatogram Creator
- 32... Peak Detector
- 33... Compound Identifier
- 34... Compound Database
- 5 35... Automatic CI-Control-Program Creator
- 4... Analysis Control Unit
- 41... Next Analysis Ionization Method Checker
- 42... Continuous Analysis Condition Memory
- 5... Central Control Unit
- 10 6... Input Unit
- 7... Display Unit