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The Algorithms Modernization of Temperature and Gas Control Systems of Ion Mobility Spectrometer

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New algorithms were developed to control the drift region heaters and the gas pumps of ion mobility spectrometer. The efficiency of substances detection was increased. Control algorithm block heaters can improve the accuracy of temperature stabilization in terms of the significant events of the time constants of thermal circuits and high heat capacity elements of the drift region. The improved control algorithm of a block of gas pumps minimizes the duration of the transition process when changing the predetermined level of the engine speed over a wide range. The study and optimization of control algorithms for heaters of the drift region and the gas pump ion mobility spectrometry.