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We are interested in the control of the semilinear heat equation in order to subject its solution to constraints, here a finite number of linear constraints. It is a problem of the type controllability that we analyze in two steps. Firstly, we study the linearized problem, interpreting each linear constraint by the adjoint state. We show that the problem of control on the solution is equivalent to a problem of constraint on control. Then, using an inequality of observability which derives from the inequality of Carleman, we solve the equivalent problem. Secondly, we prove by means of a point-fixed argument that the results obtained for the linearized problem remain valid for semilinear case. We then applied the results obtained to the sentinels theory of J. L. Lions. (Received September 13, 2008)