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(57) Abstract :

A compact reaction chamber (10) integrates a transparent housing (12), a colorimetric sensor (14), and a pH electrode (16) for real-time monitoring of chemical reactions. A microcontroller (18) processes data from both sensors and displays results on a display unit (20), providing continuous tracking of color changes and pH variations. The system includes wireless data transfer, a memory module (22) for data logging, and an optional mixing mechanism (26), ensuring high accuracy, portability, and efficiency for laboratory and field applications.

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