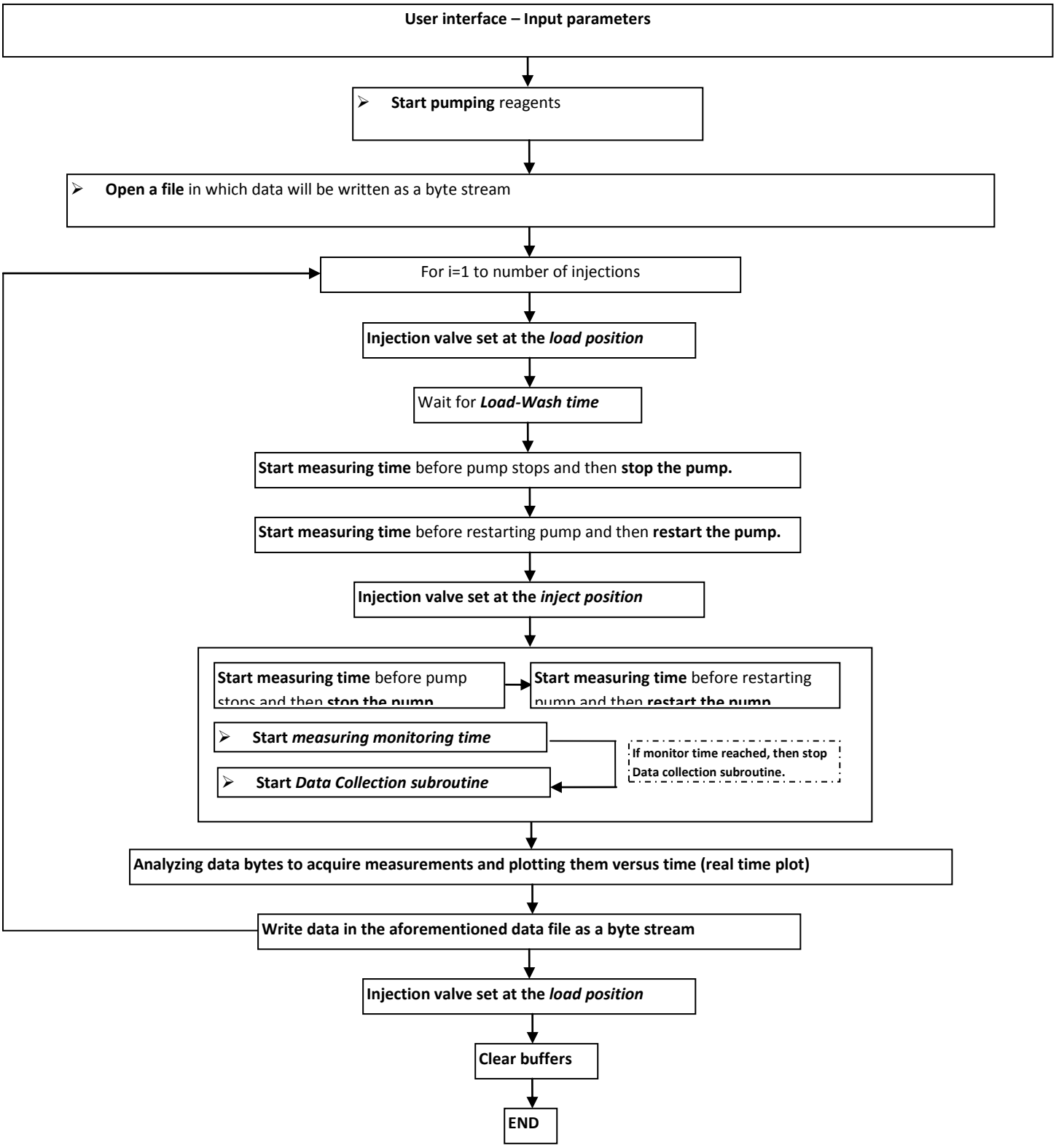Data acquisition and control program flowchart