An electroanalytical method has been developed for the determination of 1-[[2-(cyclopropanecarbonyl) phenyl] sulfamoyl]-3-(4,6-dimethoxypyrimidin-2-yl) urea (cyclosulfamuron) herbicide by square wave adsorptive stripping voltammetry on hanging mercury drop electrode (HMDE) in aqueous solution with Britton-Robinson buffer as supporting electrolyte.

Operational parameters have been optimized and stripping voltammetric performance has been investigated using square wave scans. The adsorptive stripping response is linear over the range of 10-300 µg/L (r = 0.996) cyclosulfamuron, with a detection limit of 3.5 µg/L under the conditions used pH 6.0 B-R buffer, a deposition potential of –400 mV (vs. Ag/AgCl) and a deposition time 75 s. Effect of square wave frequency, step potential and pulse amplitude were examined for the optimization of instrumental conditions. The validity of the developed methodology was assessed by recovery experiments.

The proposed method was successfully applied to the direct determination of cyclosulfamuron in spiked soil and natural water.