E2-35 Trace level determination of the fungicide, copper oxychloride

Namal Priyantha, Sarath Malavipathirana, Palitha Jayaratne
(*Dept. of Chemistry, Univ. of Peradeniya*)

Copper oxychloride (dicopper chloride trihydroxide)is commonly used in Sri Lanka as a fungicide to control plant diseases including anthracnose and cercospora leaf spot on vegetables, chillies, tobacco and cloves. Analysis of copper oxychloride is usually performed by colorimetric or atomic absorption methods.

Two new electroanalytical methods were developed for the analysis of copper oxychloride in water. The first method is based on the potentiometric determination at a thin copper wire, while the second method involves an amperometric detection at a bare glassy carbon electrode. The potential applied for amperometric detection was -0.15 V vs. SCE. The minimum detection limit of the 2 methods were 65 ìg/L and 2 ìg/L, respectively. Both methods are based on the selective determination of copper(II) species in the solution and consequently, many common interferent species in agricultural fields, with the exception of Fe(III) ions, do not interfere.

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