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Determination of Free Proteinogenic Amino Acids in Soil Solutions by HPLC with Phenyl Isothiocyanate Derivatization

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A high-performance liquid chromatography method for the determination of seventeen free proteinogenic amino acids (FPAA) in soil solutions is described. Sample preparation involves obtaining soil solution and pre-column derivatization of free amino acids using phenyl isothiocyanate. Phenyl thiocarbamyl derivatives are separated on a reversed-phase column by using linear gradient elution with 140 mM sodium acetate buffer solution (pH 6.0) contained 0.05% triethylamine as mobile phase A and acetonitrile-water (60:40,v/v) as mobile phase B. The described method showed adequate linearity, recovery values, limits of detection, and suitable for the determination of FPAA in soil solutions.

Keywords: amino acid derivatization, soil solution, free amino acids, amino acids in soil, phenyl isothiocyanate, HPLC.

Определение свободных протеиногенных аминокислот почвенного раствора методом ВЭЖХ с предколоночной дериватизацией фенилизотиоцианатом

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Описан способ определения семнадцати свободных протеиногенных аминокислот почвенного раствора методом высокоэффективной жидкостной хроматографии. Протоподготовка

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