

II INTERNATIONAL SYMPOSIUM OF EXPERIMENTAL MUTAGENESIS IN PLANTS - PLOVDIV, BULGARIA, 1987

Selection and Characterization of Amino Acid Analogues Resistant Cell Lines of Medicago.

*Mariana Vlachova, Anelia Atanassova, Atanas Atanassov
Institute of Genetic Engineering, Kostinbrod Bulgaria*

Amino acid analogs supplied to the culture medium caused a strong inhibition of growth in a wide range of organisms. The synthesis of many amino acids in higher plants, as in bacteria, have been shown to be controlled by feedback inhibition. We synthesized Edman derivative, diphenyl-iso-thiocyanate and used to covalently modify amino acids in cellular extracts for sensitive amino acids detection. It was achieved a sensitivity of amino acids UV detection by two orders of magnitude higher compared to the Edman derivatization. It allowed a detection of trace amounts of free amino acids in cells for physiological studies, as well as manual N-terminal amino acids peptide sequencing.

C18, 25 cm X 4.6 mm I.D., 5 μ m particles
mobile phase: water / acetonitrile
Gradient: 50% - 80% CAN (2 - 20) min
Separation time 25 min
Temperature: ambient
Detection: UV at 257 nm

