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Modified Ninhydrin Reagent for the Detection of Amino Acids on TLC Paper

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Abstract : Ninhydrin is the most well known spray reagent for identification of amino acids. Spring with Ninhydrin as a non-specific reagent is well-known and widely used for its remarkable high sensitivity. Using Ninhydrin reagent alone to detect amino acid on thin layer chromatography (TLA) paper is not advisable due to its lower sensitivity. A new spray reagent, Stannus chloride solution (Sn CL2) has been used to detect amino acids on filter paper (witman 14) and TLC paper, silica Gel, 60 F254 TLC Aluminium Sheet 20x20cm Merck- Germany. Also, modified TLC pre-staining method was used, which only consisted of 3 steps: spotting, separating and color. The improved method was rapid and inexpensive and the results obtained were clear and reliable. In addition, it is suitable for screening different amino acid.

Keywords: amino acid, ninhydrin, modified ninhydrin reagent, stannus chloride reagent, thin-layer chromatography (TLC), TLC pre-staining

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