

Activity staining of pectinesterase on polyacrylamide gels after acidic or sodium dodecyl sulfate electrophoresis

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Abstract

Pectinesterase (PE), from commercial orange peels or ammonium sulfate fractionation (50-80% saturation) of pea pods, was detected on polyacrylamide gels after native acidic polyacrylamide gel electrophoresis (PAGE) or sodium dodecyl sulfate (SDS)-PAGE by using the synthetic substrate -naphthyl acetate (-NA). The release of -naphthol (at 322 nm) from -NA was proportional to PE activity. The PE activity bands on polyacrylamide gels after native acidic PAGE or SDS-PAGE were stained with a combination of tetrazotized o-dianisidine and -NA. This fast and sensitive method can be used for enzyme purification and characterization.