Title: Prolidase Deficiency *GeneReview* - Laboratory techniques used in the diagnosis of prolidase deficiency

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Measurement of prolidase enzyme activity in erythrocytes, leukocytes, or cultured fibroblasts. Assays are performed with high concentrations (10-50 mM) of imidodipeptides as substrates [Hechtman 2014]. The preferred substrate is Gly-Pro [Royce & Steinmann 2002]. Following incubation at 37°C, the reaction is terminated by heating or by adding trichloroacetic acid [Hechtman 2014]. The released proline is quantitated by spectrophotometry, using either Chinard's original method [Chinard 1952] or its modification by Myara et al [1982]. Other techniques used for measuring prolidase activity include reverse-phase high-performance liquid chromatography [Harada et al 1990], capillary electrophoresis [Zanaboni et al 1997], and more recently MALDI-TOF mass spectrometry [Kurien et al 2004].

A review of the different laboratory techniques used in the diagnosis of prolidase deficiency can be found elsewhere [Kurien et al 2006, Viglio et al 2006].

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