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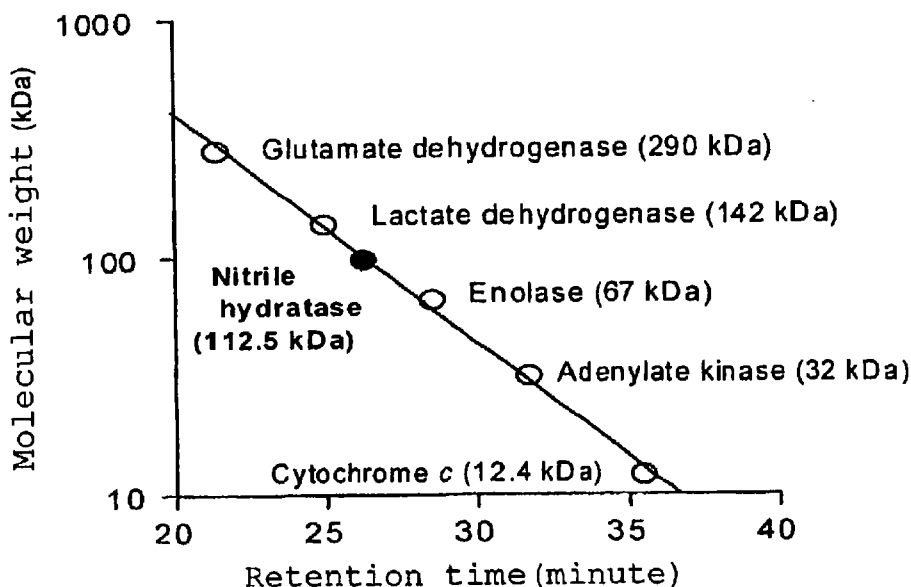
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- (71) Applicant (for all designated States except US): **DAICEL CHEMICAL INDUSTRIES, LTD.** [JP/JP]; 1, Teppo-cho, Sakai-shi, Osaka 590-8501 (JP).
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- (72) Inventors; and
(75) Inventors/Applicants (for US only): **NAGASAWA, Tohru** [JP/JP]; 71-12-C-210, Kurono, Gifu-shi, Gifu
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(54) Title: NITRILE HYDRATASE AND A METHOD FOR PRODUCING AMIDES



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(57) Abstract: An objective of the present invention is to provide a nitrile hydratase capable of producing 2-hydroxy-4-methylthiobutyroamide. The present invention provides a novel nitrile hydratase producing α -hydroxyamide using α -hydroxynitrile as the substrate, and the encoding DNA thereof. The enzyme can be obtained from *Rhodococcus* sp. Further, the enzymatic activity of the enzyme can be maintained stably during the reaction. The present invention provides a method for producing amide compounds, the method comprising the step of reacting this enzyme to nitrile compounds. According to the present invention, from hydroxy nitrile compounds, corresponding amide compounds can be produced biochemically without reducing the enzyme activity of nitrile hydratase.

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