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(54) Title: METHOD FOR STABILIZING NITRILASE ACTIVITY AND PRESERVING MICROBIAL CELLS

(57) Abstract: A method for preserving immobilized or unimmobilized microbial cells having nitrilase activity and for stabilizing the nitrilase activity of unimmobilized or immobilized microbial cells has been developed. The unimmobilized or immobilized microbial cells are stored in an aqueous solution containing from about 0.10 M to the saturation concentration of an inorganic salt of bicarbonate or carbonate, including ammonium, sodium and potassium salts of bicarbonate or carbonate. Aqueous suspensions containing at least 100 mM bicarbonate or carbonate limit microbial contamination of the stored enzyme catalyst, as well as stabilize the desired nitrilase activity of the unimmobilized or immobilized cells. Microorganisms which are characterized by a nitrilase activity and are stabilized and preserved by this method include *Acidovorax facilis* 72-PF-15 (ATCC 55747), *Acidovorax facilis* 72-PF-17 (ATCC 55745), *Acidovorax facilis* 72W (ATCC 55746), and transformed microbial cells having nitrilase activity, preferably *E. coli* SS1001 (ATTCC PTA-1177) which is transformed with *Acidovorax facilis* 72W nitrilase activity.