

Cleaning of discharges with E-LINE Wastewaters and E-LINE Hydrocarbons & Solvents

APPLICATION:	<ul style="list-style-type: none"> • Treatment of civil discharges • Treatment of industrial discharges
TIMING OF APPLICATION:	Aerobic phase to active mud
WORKING PRINCIPLE:	The bacteria enzyme mix is capable of intensifying the eso-enzymatic activity already present in the discharges as secretions of microbes, in the hydrolytic phase of bio-molecules, allowing a faster build up of the biomass.
Main problems of civil and industrial wastewater treatments	
<ul style="list-style-type: none"> ➤ Type A: Physical quality of mud <ul style="list-style-type: none"> ▪ Bulking of the grain: an excessive presence of filament based microorganisms makes the grain jelly and watery, stopping its sedimentation ▪ Formation of surface foam: again due to filament based microorganisms that grow at the surface of the sump forming by dehydration a crust that impedes sedimentation ➤ Type B: Shock by organic overload ➤ Type C: Organic crust ➤ Type D: Presence of pollutants that inhibit enzymatic activity: <ul style="list-style-type: none"> ▪ High COD ▪ Aromatic solvents ▪ Paraffin & wax ▪ Aldeids & chetons ▪ Heavy metals ▪ Ammonia ➤ Type E: Ph oscillations 	
Effect resulting from the application of the NEPH products	
<ul style="list-style-type: none"> ▪ Type A: <ul style="list-style-type: none"> - As the products are made of selected cultures, these are capable of balancing the excessive presence of filament based microorganisms ▪ Type B: <ul style="list-style-type: none"> - Oscillation of organic load, typical of civil discharges, is buffered by the enzymatic activity of the product that, in presence of an overload, intensifies its catalyzing activity of the molecules hydrolytic phase ▪ Type C: <ul style="list-style-type: none"> - The breakdown of organic molecules by enzymatic activity due to the products affects as well the electro-mechanical parts of the treatment plants ▪ Type D: <ul style="list-style-type: none"> - The products are capable of quickly degrading high polluting loads, typical of industrial discharges, with a mechanism in which bacteria cultures aggress molecules creating links with heavy metals ▪ Type E: <ul style="list-style-type: none"> - It is a direct consequence of the ability to quickly degrading high polluting load that provoke Ph fluctuations 	

PERFORMED TESTS			
Executed by:	Objective	Problems	Effects
SOGEIVA VARESE AMBIENTE	Treatment plant of civil and industrial wastewaters with an equivalent throughput of 5000 inhabitant equivalent	- fluctuation in treatment results - problems with sedimentation due to overload	Product used: both
			- regularization and uniformization of treatment results - improvement of nitrification phase - 50% reduction of SVI
CITY DI CHARRAT (BELGIO)	Treatment of civil wastewaters	- ammonia exhalations - organic surface crusts	Product used: Wastewaters
			- highly noticeable reduction of ammonia smell - elimination of crusts - savings in electric power due to decrease in used of mechanical apparati
CONSORZIO DEPURAZIONE ACQUE REFLUE CUSIO AGOGNA	Treatment of civil wastewaters	- startup of biological activity following a maintenance shutdown	Product used: Wastewaters
			- rapid formation of mobile and sessile ciliates at the bottom of the sumps - SVI max obtained 130
MONTGOMERY WATSON	Volpaia (GENOVA) Treatment plant of civil wastewaters	- presence of organic crusts at the surface of the digester, in the ducts and in the electro-mechanical part of the B line of the plant	Product used: Wastewaters
			- complete liquefaction of the organic crust - complete anaerobic digestion of the mud - increase of biogas production
S.G.S. REDWOOD	Treatment plant of tanning industrial wastewaters (Solofra)	- foul smell - high polluting load - acid Ph	Product used: both
			- neutralization of ph - elimination of foul smell - phenol reduction - reduction of excess mud and foam
S.G.S. REDWOOD	Treatment of wastewaters from tank washing	- presence of aromatic solvents, paraffin, acetone	Product used: Hydrocarbons & Solvents
			- high reduction of polluting load