

Biogas Purification through the use of a Microalgae-Bacterial System in Semi-Industrial High Rate Algal Ponds

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Materials

Name	Company	Catalog Number	Comments
1" rotameter	CICLOTEC	N/A	
1" rotameter	GPI	A10-LMA100IA1	
Absorption tank	EFISA	Made under previous design	
Air blower (2.35 HP)	Elmo Rietschle	2BH11007AH01	
Biogas blower (2 HP)	Elmo Rietschle	2BH11007AH01	
Biogas composition measure	Geotech	BIOGAS 5000	
Data-acquisition device	LabJack Co.	U3-LV	
Diffuser tubes	Aero-Tube	C3060AR	
DO sensor	Applisens	Z10023525	
Dodecahydrated trisodium phosphate	Quimica PIMA	N/A	Fertilizer grade (greenhouse and exterior use)
Dodecahydrated trisodium phosphate	Fermont	35963	Analytical grade (Used in cultures inside the laboratory)
Durapore membrane (45 µm)	MerckMillipore	HVLP04700	
Electric motor 1.5 HP	Weg	00158ET3ERS56C	
Ferrous sulfate heptahydrate	Agroquímica Samet	N/A	Fertilizer grade (greenhouse and exterior use)
Ferrous sulfate heptahydrate	Fermont	63593	Analytical grade (Used in cultures inside the laboratory)
Geomembrane	GEOSINCERE	N/A	
Magnesium sulfate heptahydrate	Tepeyac	N/A	Fertilizer grade (greenhouse and exterior use)
Magnesium sulfate heptahydrate	Fermont	63623	Analytical grade (Used in cultures inside the laboratory)
Paddle wheel	GSI	Made under previous design	
pH sensor	Van London pHoenix	715-772-0041	
Portable screen	Rasspberry	Pi 3 B+	

Recirculation centrifugal pump (1.5 HP)	Aquapak	ALY 15	
Sodium bicarbonate	Industria del alcali	N/A	Fertilizer grade (greenhouse and exterior use)
Sodium bicarbonate	Fermont	12903	Analytical grade (Used in cultures inside the laboratory)
Sodium chloride	Sal Colima	N/A	Fertilizer grade (greenhouse and exterior use)
Sodium chloride	Fermont	24912	Analytical grade (Used in cultures inside the laboratory)
Sodium nitrate	Vitraquim	N/A	Fertilizer grade (greenhouse and exterior use)
Sodium nitrate	Fermont	41903	Analytical grade (Used in cultures inside the laboratory)
Storing program (pH, DO)	Python Software Foundation	Python IDLE 2.7	
Tedlar bags	SKC Inc.	232-25	
Temperature recorder	T&D	TR-52i	
UV-Vis Spectrophotometer	ThermoFisher Scientific instrument	GENESYS 10S	
Vacuum pump	EVAR	EV-40	