

Employing Aeroponic Systems for the Clonal Propagation of Cannabis

Trevor Regas¹, Joon-Hee Han², Christopher S. Pauli³, Sang-Hyuck Park^{1,3}

¹Biology Department, Colorado State University-Pueblo ²Chuncheon Bioindustry Foundation ³Institute of Cannabis Research, Colorado State University-Pueblo

Corresponding Author

Sang-Hyuck Park
sanghyuck.park@csupueblo.edu

Citation

Regas, T., Han, J.H., Pauli, C.S., Park, S.H. Employing Aeroponic Systems for the Clonal Propagation of Cannabis. *J. Vis. Exp.* (178), e63117, doi:10.3791/63117 (2021).

Date Published

December 1, 2021

DOI

10.3791/63117

URL

jove.com/video/63117

Materials

Name	Company	Catalog Number	Comments
1-part Fox Farm	Fox Farm		Soil Mix
1-part Promix	Promix		Soil Mix
1-part Roots Organic Original	Aura Innovations		Soil Mix
1-part Wiggle Worm Earth Worm Castings	UNCO Industries		Soil Mix
Algae and Bacterial Cleaning Solution (Clear Rez)	EZ Clone	SKU#: 225	8 fl. Oz.
Artificial Lighting	AgroBrite	SKU#: 1399	T5 324W 4' 6-Tube Fixture with Lamps
Cannabis Mother plant 1 (Cherry Wine)	Summit CBD	N/A	Donated material
Cannabis Mother Plant 2 (Red Wine)	Trilogene	SKU: 0101RR	
Corresponding Plastic Lid	Office Depot	N/A	38.1 cm x 25.4 cm
Drill Bit 1	Dewalt	DW1586	38.1 mm spade drill bit
Drill Bit 2	Dewalt	DW1308	3.175 mm drill bit
Flora/Bloom (Nutrient Solution)-5 mL	General Hydroponics	SKU#: 726	946 mL (1 Quart) 2.43 lbs. (1.1 kg) (Available Phosphate 5.0%, Soluble Potash 4.0%, Magnesium 1.5%, Sulfur 1.0%)
FloraGrow (Nutrient Solution)- 5 mL	General Hydroponics	SKU#: 724	946 mL (1 Quart) 2.43 lbs. (1.1 kg) ((Total Nitrogen 2.0% (0.25% Ammoniacal Nitrogen, 1.75% Nitrate Nitrogen), Available Phosphate 1.0%, Soluble Potash 6.0%, Magnesium 0.5%))
FloraMicro (Nutrient Solution)- 5 mL	General Hydroponics	SKU#: 759	946 mL (1 Quart) 2.43 lbs. (1.1 kg) ((Total Nitrogen 5.0% (0.3% Ammoniacal Nitrogen, 4.7% Nitrate Nitrogen), Soluble Potash 1.0%, Calcium 5.0%, Boron 0.01%, Cobalt 0.0005%, Copper 0.01%, Iron 0.1%, Manganese 0.05%, Molybdenum 0.0008%, Zinc 0.015%))

Horticultural Scissors	Shear Perfection	SKU#: 12620	Platinum Stainless Steel Bonsai Scissors (2.4")
Isopropyl Alcohol	Equate	Walmart # 574133562	70% concentration
Nutrient Mist Solution (Clonex Mist)	Growth Technology	SKU#: 4889	10.14 fl. Oz (300 ml) (Total Nitrogen: 5.9×10^{-4} %, Available Phosphate: 4.0×10^{-4} %, Soluble Potash: 5.0×10^{-4} %)
pH Down	General Hydroponics	SKU#: 733	946 ml (1 Quart) 2.43 lbs. (1.1 kg)
pH Up	General Hydroponics	SKU#: 730	946 ml (1 Quart) 2.43 lbs. (1.1 kg)
Plastic Container	Office Depot	N/A	38.1 cm x 25.4 cm x 30.48 cm
Power Drill	Dewalt	DCD709B	20-Volt Max ½" Drill
Rockwool Cubes	Grodan	SKU#: 830	38.1 mm
Rooting Solution (Clonex Rooting Gel)	Growth Technology	SKU#: 939	3.4 fl. Oz. (100 ml) (Indolebutyric Acid - 0.31%)
Statistic Software (Prism)	GraphPad Inc.		
Submersible Water Pump	ActiveAQUA	SKU: AAPW250	Model: AAPW250, Voltage 120V, Power 16W