

# **PeaPod - Progress Report**

NASA/CSA Deep Space Food Challenge Phase 2

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# **1 Design Status**

## **1.1 Automation Subsystem**

## **1.2 Housing**

## **1.3 Aeroponic Subsystem**

### **1.3.1 Solution Nutrients and pH Regulation**

### **1.3.2 Solution/Root-Zone Temperature Regulation**

### **1.3.3 Mist Delivery**

## **1.4 Leaf-Zone Thermoregulation Subsystem**

## **1.5 Leaf-Zone Humidity Regulation Subsystem**

### **1.5.1 Leaf-Zone Humidification**

### **1.5.2 Leaf-Zone Dehumidification**

## **1.6 Gas Composition Regulation Subsystem**

### **1.6.1 Gas Exchange**

### **1.6.2 Gas Supplementation**

## **1.7 Lighting**

# **2 Process Description**

## **2.1 Setup**

## **2.2 Operation**

## **2.3 Maintenance**

## **2.4 Cleaning**

# **3 System-Level Build Process Report**

# **4 Materials**

## **4.1 System Materials**

## **4.2 Maintenance and Cleaning Materials**

## **4.3 Inputs**

## **4.4 Outputs**

## **4.5 By-Products and Waste**

# **5 Prototype Build Status**

## References