Novel Cleanroom With Life Support System for Experimentation in a Variety of Fields Including Ecology, Chemistry, and Biology

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Invention:

The invention is a new device for environmental control that uses a series of compartments subdivided into uniquely suited sections making this device entirely modular.

Background

Cleanrooms fall under two broad categories, conventional sterile rooms and mini environments. The present invention is a mini environment, that is, it has a precisely controlled amount of environmental pollutants. While sterile rooms are preferred for some applications, they have high capital and operating costs and are inappropriate for applications such as controlled environments for conducting tests that mimic naturally occurring environments.

Advantages:

Modular
Precise control over environmental parameters
Can be adapted to fit a variety of experimental needs

Applications:

Conducting experiments on naturally occurring biological phenomena but in more controlled and smaller scales (e.g. plant pathology can be studied in an environmentally controlled space rather than in vivo)

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Suitable for conducting environmental studies under precisely controlled conditions.

Potentially adaptable for future lunar or martian missions.

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