

IAF MICROGRAVITY SCIENCES AND PROCESSES SYMPOSIUM (A2)  
Science Results from Ground Based Research (4)

Author: Mr. Matt Harasymczuk  
Analog Astronaut Training Center, Poland

CREATING RANDOM POSITIONING MACHINE FOR SIMULATING-MICROGRAVITY CELL  
CULTIVATION RESEARCH

**Abstract**

Random Positioning Machines or clinostats 3D are devices which were first described in 2007 by Jack J.W.A. van Loon. Since original publication the new designs emerged in the industry but all devices cost fortune.

Based on theoretical foundations from the white-paper, after multiple of iterations we've created a RPM machine for a fraction of a cost accessible from 3rd party vendor. Device is already lab proven design in being use in protein growth and cell cultivation experiments.

This lecture will be a case study of the RPM machine implementation, its design, and tests.