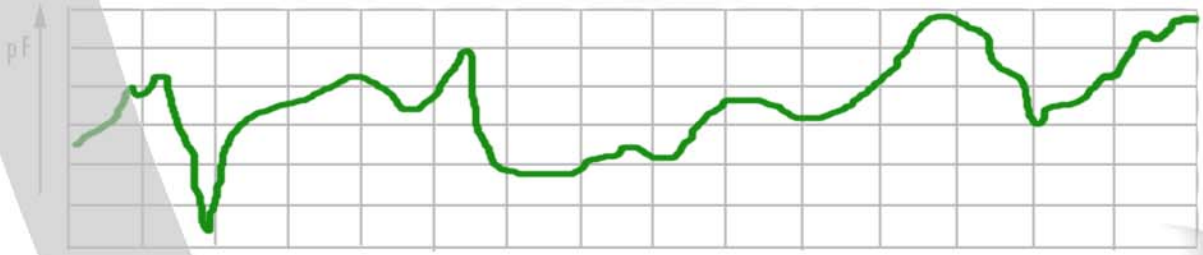
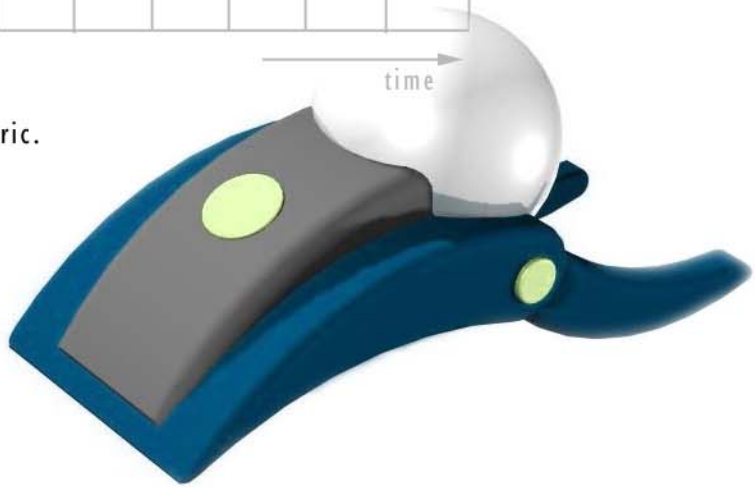
Visuallife PROJECT

Visual life
PROJECT

First inviromental chamber to mesaure the changing electrical resistance on plant leaves.



Reading of the changing capacity using a plants leaf as the dielectric.



A common way to measure biological activities on living objects like EKG, EEG or Electrical Resistance is to attach electrodes to the object. In many cases, electric conductive gels are used to increase conductance between the object and the electrode. The disadvantage of these methods are in long term measurements. Depending on what signals are measured, the electrical resistance between the object and the electrodes is changing during the time, and the result of the measurement can be misleading. In monitoring water- and nutrition consumption on living plants, the resistance of a connected electrode is changed dramatically as an effect of drying out where the electrode is connected.

Matter brought between two plates of a capacitor is defined as the capacitor's dielectric. The dielectric constant is dependent on the Molecular Structure of the matter between the capacitor plates and also by using alternating current, on the current's frequency. When the plant changes its water and mineral consumption, a slightly different dielectric field is detected, the relative field change is amplified and the signal converted into a voltage which controls the power of three colored light bulbs.

The result: Whenever the plants activity changes, the mixed light color of the three light bulbs changes.

You can watch how the plant lives!