

# Skye SKPM 1400

## *Plant Moisture Potential Measurement*



### **What can the Skye SKPM 1400 detect?**

Detection of **drought stress** before wilting symptoms appear.

### **How do you use the Skye SKPM 1400?**

**Cut leaves or stems** from plants in your crop. **Incubate the leaves or stems for 1 h in the dark** before measurement to **close the leaf pores (stomata)**. Place the leaf or stem in the rubber seal and close them **in the pressure chamber**. **Record the pressure at which the first droplet appears at the cut surface**. Take at least **5 scattered measurements** to reach a conclusion.

### **Scientific background & interpretation results**

The apparatus uses compressed gas to put pressure on the leaf/stem. The pressure required to squeeze the first droplet is equivalent to xylem pressure in the plant (the leaf or stem water potential) which is proportional to the water availability/status in the plant.

If plant experiences drought stress:

- ➔ Pressure at which the first droplet appears will increase ↑
- ➔ The pressure at optimal conditions may vary depending on plant species and developmental stage and is normally below 2-3 MPa. Values above that can signify stress.

### **Pros & Cons**

- + simple principle, easy to use, low maintenance
- quite expensive, destructive method, adaption of leaves to the dark is required, operator bias, air tank required, leaves with short or no petioles are difficult to measure

**Price range:** € 8000 - 10000

**Company:** SKYE

### **More information?**

<https://www.skyeinstruments.com/category/products/plant-moisture-systems/>