

**Respirometer**

It is an instrument meant for measuring the rate of respiration. The common one is Ganong's respirometer. The instrument also measures RQ.

Respirometers are designed to measure respiration either on the level of a whole animal (plant) or on the cellular level. These fields are covered by whole animal and cellular (or mitochondrial) respirometry, respectively.

A simple whole plant respirometer designed to measure oxygen uptake or CO<sub>2</sub> release consists of a sealed container with the living specimen together with a substance to absorb the carbon dioxide given off during respiration, such as soda lime pellets or cotton wads soaked with potassium hydroxide. The oxygen uptake is detected by manometry. Typically, a U-tube manometer is used, which directly shows the pressure difference between the container and the atmosphere. As an organism takes up O<sub>2</sub>, it generates a proportionate quantity of CO<sub>2</sub> but all the CO<sub>2</sub> is absorbed by the soda lime. Therefore all of the drop of pressure in the chamber can be attributed to the drop of O<sub>2</sub> partial pressure in the container. The rate of change gives a direct and reasonably accurate reading for the organism's rate of respiration.

A Respirometer may also be called an oxygraph.