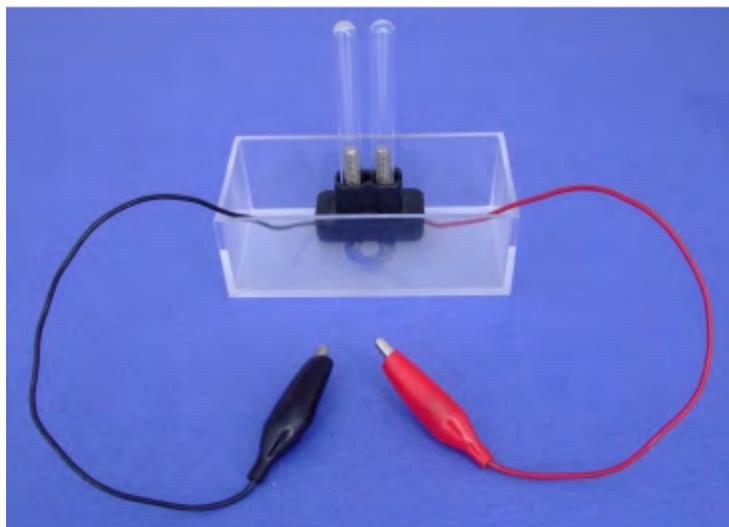


665-0230 (74-020) Electrode Stand

Introduction: Electrolysis of water is nothing more than the production of hydrogen and oxygen gas from water. It is accomplished by running a current through the water, which causes H₂O molecules to split into their component gases. The process has been known since at least 1800 when it was observed using a Voltaic Cell; it may have been discovered in 1789, but this can not be confirmed.

Under normal circumstances water is a very stable molecule; it requires a great deal of energy to break hydrogen bonds. This means that water can only be split in the presence of a fairly large amount of energy. Electricity is particularly useful because of its ability to influence ions.

Distilled or nearly pure water will not work with your kit. Pure water is essentially an insulator, because it is dissolved ions in water that carry electricity. Tap water will usually work well with this kit, although bottled water may not. A drop of lemon juice or pinch of salt can be used if the water is too pure.



Operation: To use your kit, please follow the instructions below. You will require a 6V battery or low voltage power supply.

- Place the electrodes in the included plastic pan.
- Fill the pan with water until the tops of the electrodes are covered. This will give you the maximum surface area. The electrodes are stainless steel, which is inert enough to resist losing electrons to the water.
- Fill each test tube about one quarter full of water. Quickly invert them and slide them over the electrodes. This will ensure the electrodes are fully covered.
- Connect the leads to the battery terminals.
- After a few seconds you should see micro bubbles begin to form around the electrodes, particularly the negative one. The negative electrode produces hydrogen gas, which will be produced in twice the quantity as oxygen gas, owing to the composition of water.
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Warranty and Parts:

We replace all defective or missing parts free of charge. Additional replacement parts may be ordered toll-free. We accept MasterCard, Visa, checks and School P.O.s. All products warranted to be free from defect for 90 days. Does not apply to accident, misuse or normal wear and tear. Intended for children 13 years of age and up. This item is not a toy. It may contain small parts that can be choking hazards. Adult supervision is required.