

Science Fair 2026

Cyran

Logbook

Dec. 22: We made a prototype battery out of: Pennies for the Anode, galvanized steel for the cathode, a DMM for the measuring tool, and a vinegar-salt electrolyte. The total amount came to just under 1 Volt, or more exactly: 0.922 Volts.

Jan. 10: I ordered all my metals.

Jan. 16: I went to Staples to get my materials. After, I painted my Trifold blue. Then I wrote out my procedure.

Jan. 17: my metals arrived, and I did the first experiment, with Chromium as my cathode, and iron as my Anode.

Trial 1: 0.29V Trial 2: 0.31V Trial 3: 0.31V. The A.V.G voltage was 0.303V

Jan. 18: I did the second experiment, with Titanium as my Anode and Iron as my Cathode. Again I did three trials.

Trial 1: 0.12V Trial 2: 0.13V Trial 3: 0.18V. The A.V.G was 0.143V

Logbook

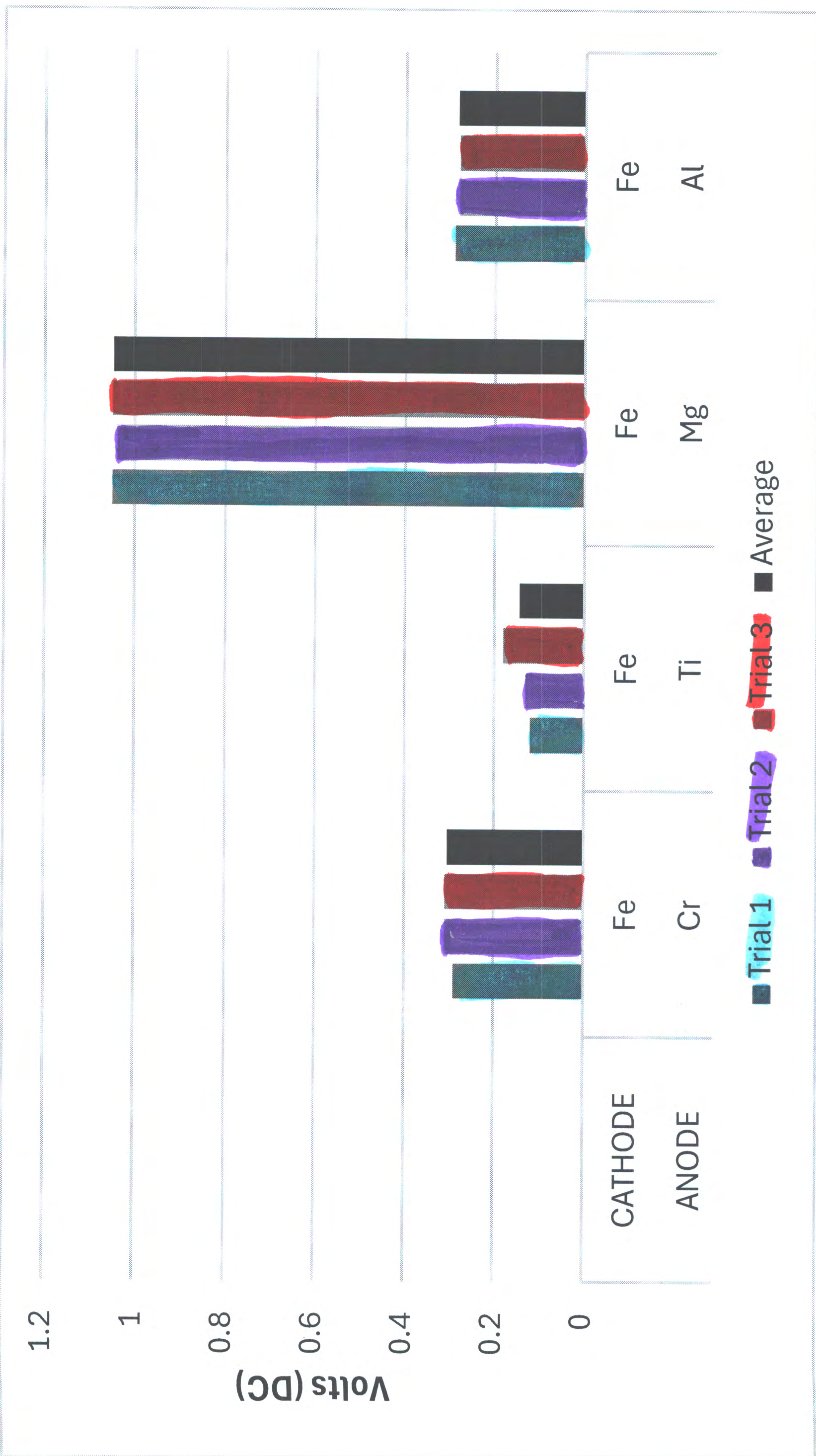
Jan. 19: I did experiment three. First with Mg for the Anode and Iron for the cathode. 1) 1.05 V. 2) 1.04 V. 3) 1.05 V
A.V.G) 1.047 V

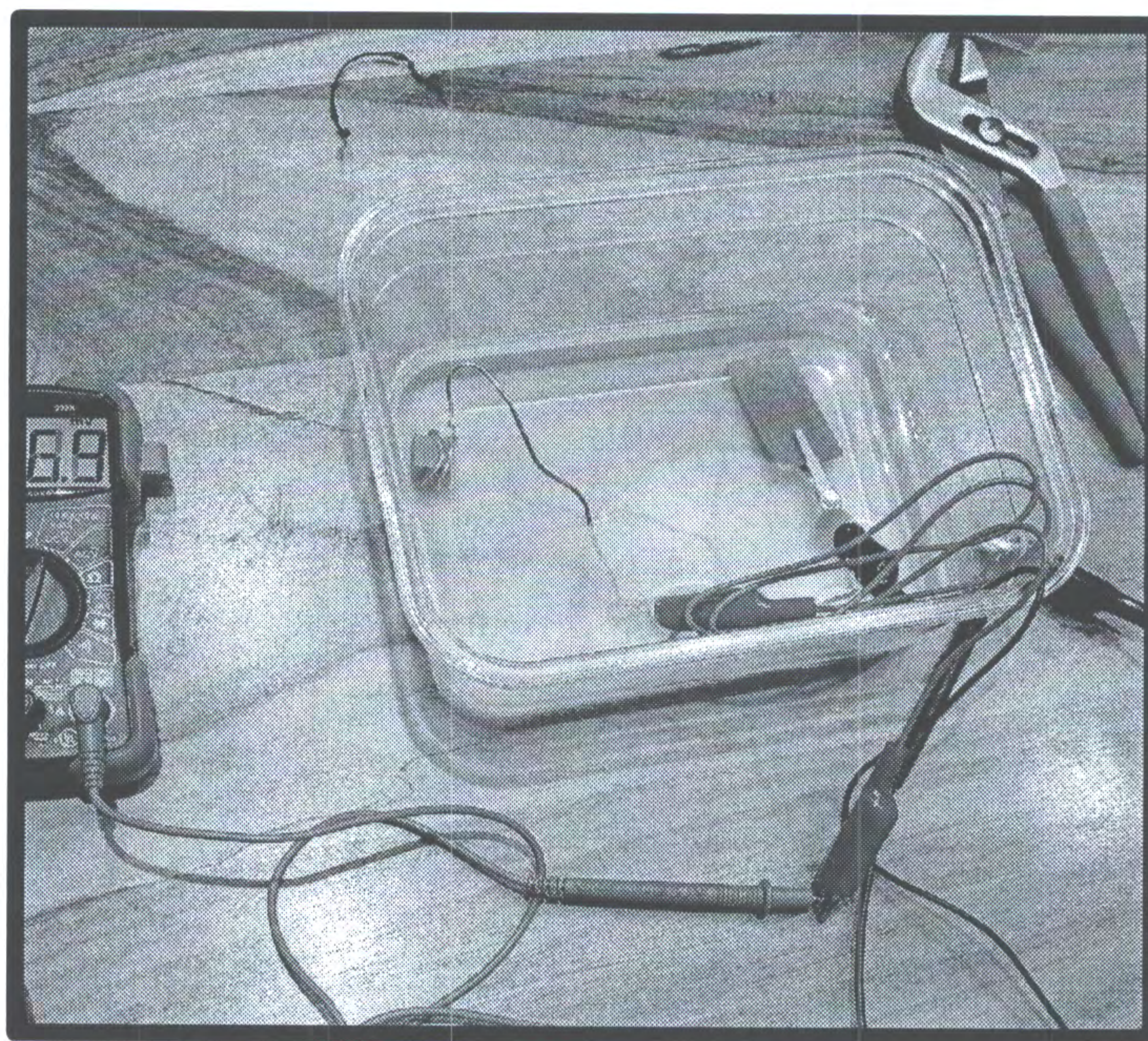
Second with Al as my Anode. 1) 0.29 V. 2) 0.28 V. 3) 0.28 V
A.V.G) 0.283 V

Jan 21 - 28: I spent working on my slides and Trifold.

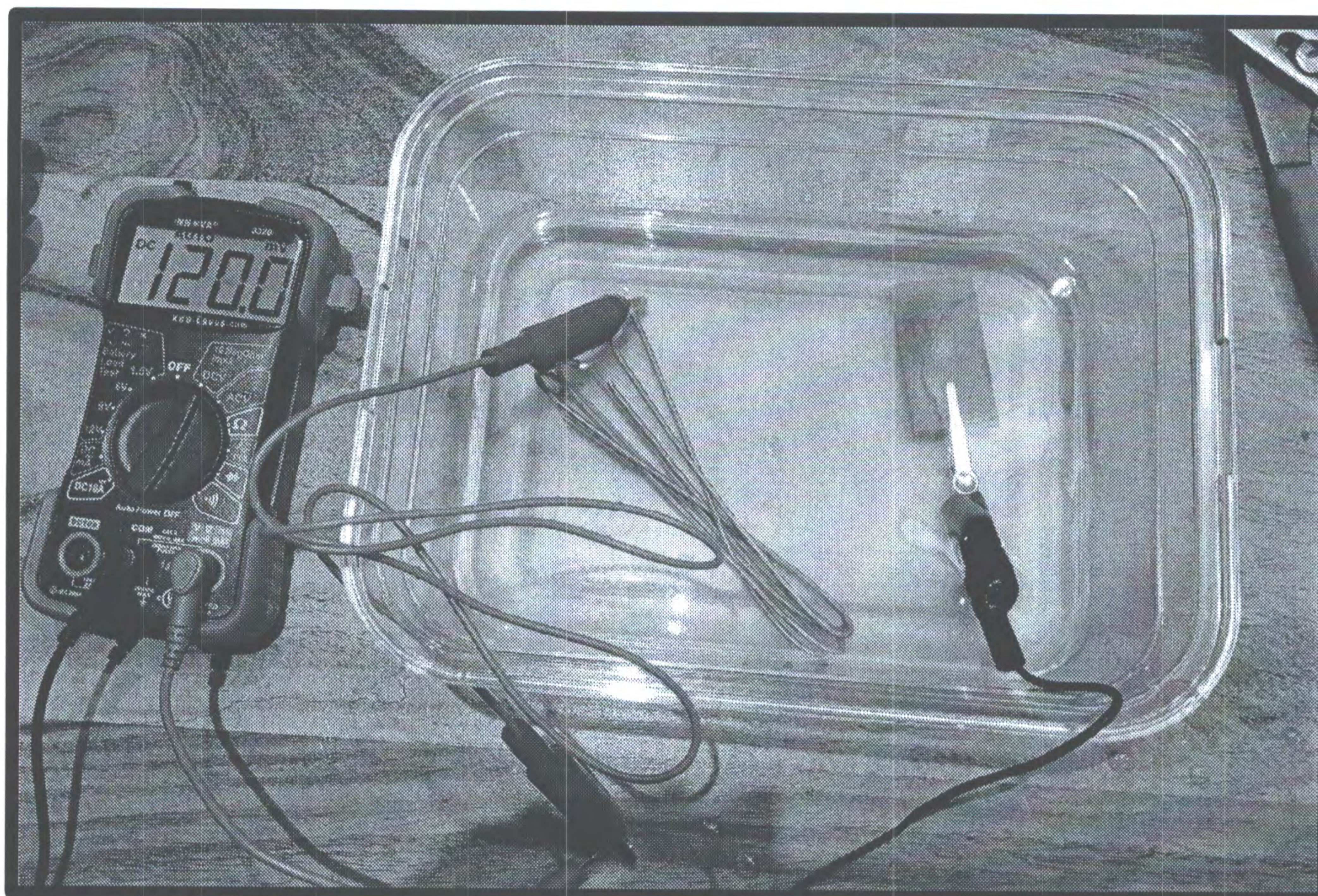
RESULTS AND OBSERVATIONS

EXPERIMENT	ANODE METAL	CATHODE METAL	MAX OPEN CIRCUIT VOLTAGE			AVERAGE VOLTAGE
Experiment 1	Chromium	Iron	1) 0.290 V	2) 0.310 V	3) 0.310 V	0.303 V
Experiment 2	Titanium	Iron	1) 0.120 V	2) 0.130 V	3) 0.180 V	0.143 V
Experiment 3	Magnesium	Iron	1) 1.050 V	2) 1.040 V	3) 1.050 V	1.047 V
Experiment 4	Aluminum	Iron	1) 0.290 V	2) 0.280 V	3) 0.280 V	0.283 V





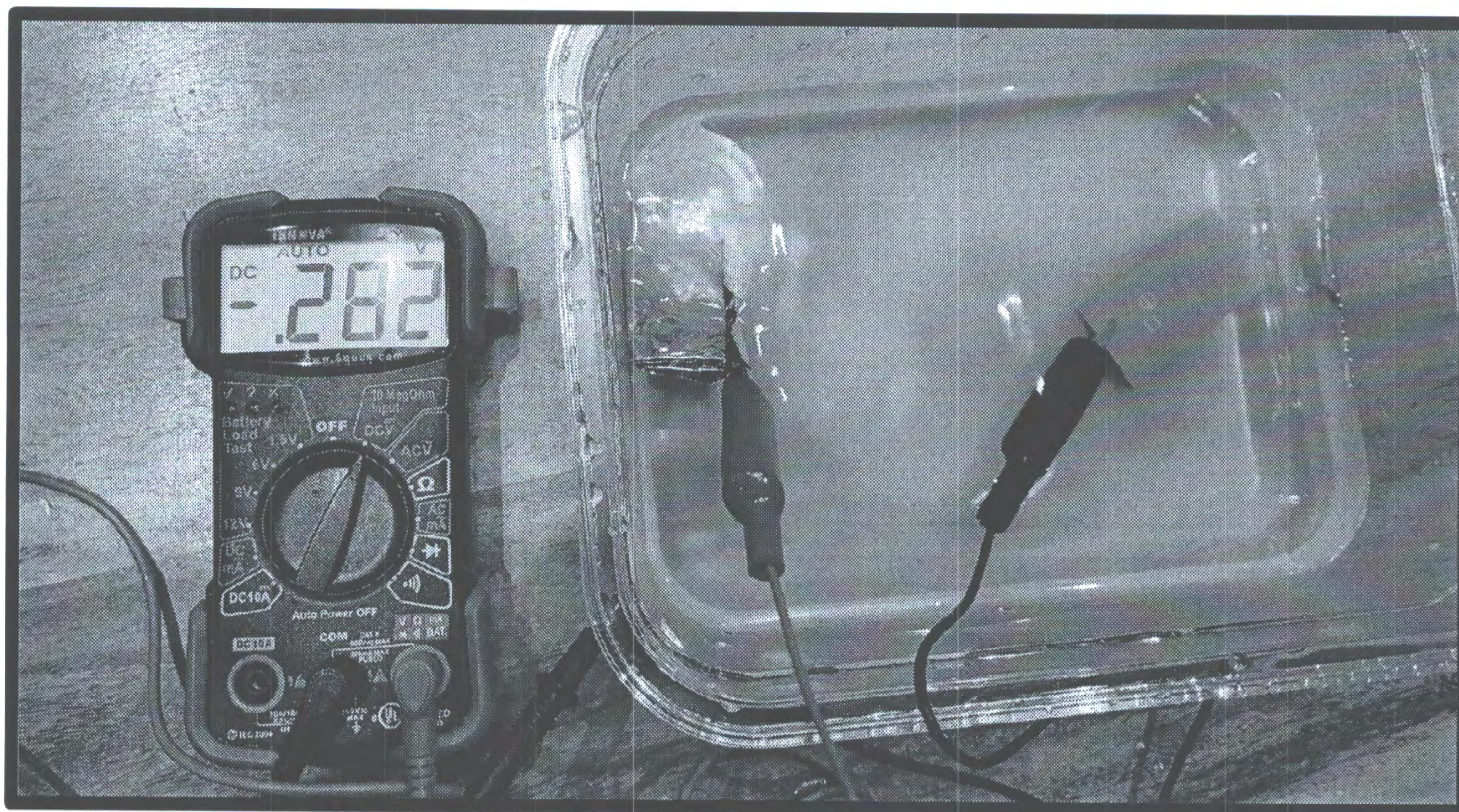
Chromium (Cr)



Titanium (Ti)

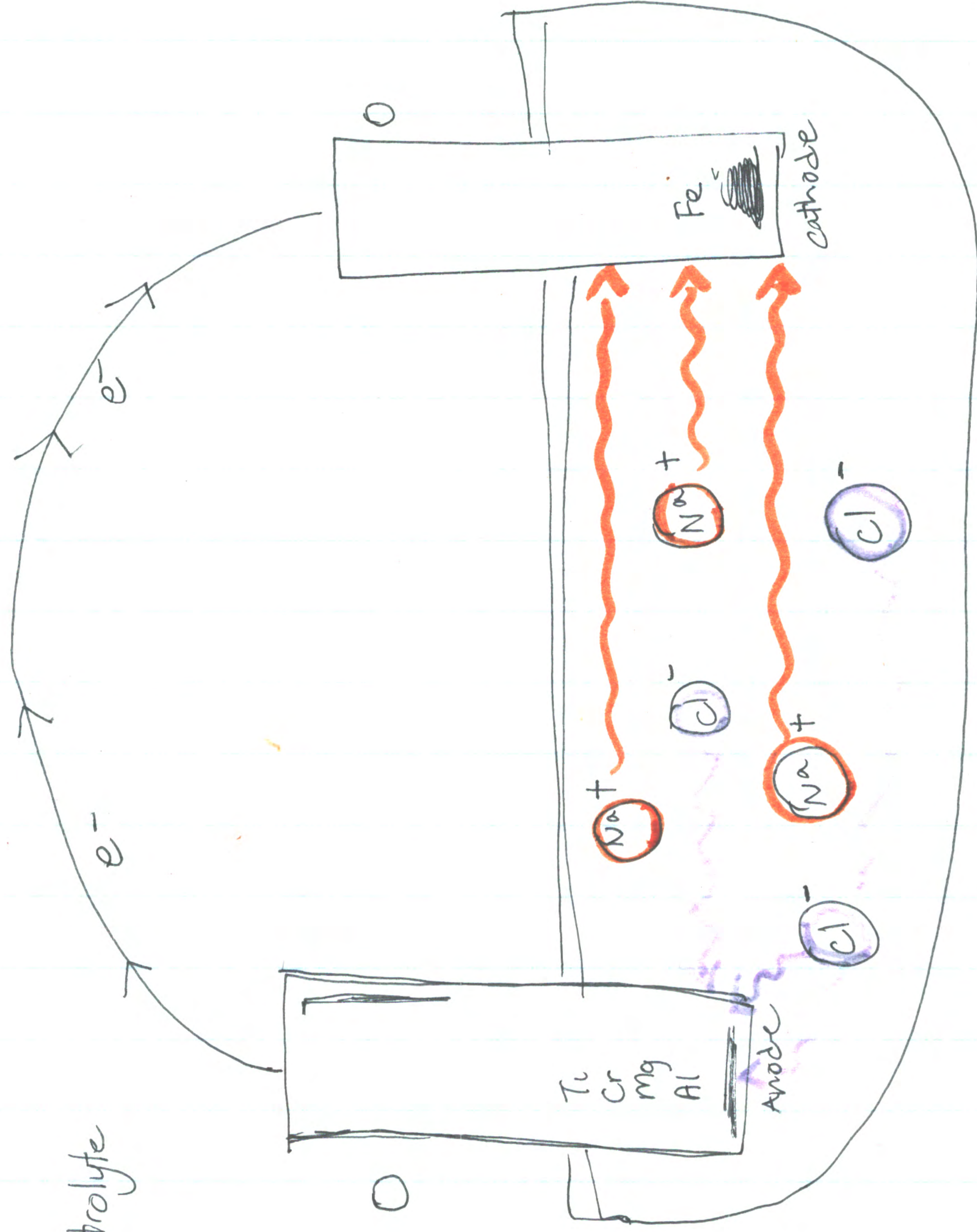


Magnesium (Mg)



Aluminum (Al)

Purpose of electrolyte



NaCl = salt

Na = sodium

Cl = chlorine

* Restore Charge Neutrality