26/08/2022

LD

64PE503 and 50289 cruises

- Acid lines clear
- Filled I/O solutions electrode
- coulometer cell: #1 w/ green-yellow top
- Allocated coulometer port (#1)
- New acid solution in titrino

KILLED CELL
Method: 3C_standard

SAMPLE	EMF 1st/mV	TA	DIC
JUNK01	169.9	2356.36	2117.72
JUNK02	170.0	2359.79	2117.81
JUNK03	TA didn't fill → leak on sample line, changing tubing filled cell w/ SW so elec. stabilizes		2115.34
JUNK04	169.7	2355.10	2116.32
JUNK05	TA didn't fill		2115.62
JUNK06	170.6	2358.98	2114.89
JUNK07	170.3	2358.98	2112.11
JUNK08	CELL VALVE MALFUNCTION → Aborted run		

line damaged when moving circ. bath tubes

→ VALVE 1 MALFUNCTION → retightened cables in black box as valve working, now opening/closing fine

Stopping for today → water in cell valve tube from cell overflow

LD

27/08/22

64PES03 + SO289

Acid lines clear + New Rising Solution
Checked elec. solutions
Coulometer cell #1 + green/yellow cap
Allocated Coulometer port
Killed all
Method: 3C. standard
Acid batch: 26/08/2022
Tested all valve → looks good, dry and working
↳ cable

SAMPLE	EMF 1st/mV	TA	DIC
JUNK01	180.2	2352.52	2211.87
JUNK02	180.5	2352.32	2180.51
JUNK03	180.6	2352.77	2179.79
JUNK04	180.7	2351.89	2176.67
CRM-189-0330-01	164.8	2194.89	1915.62
NUTSLAB01	162.4	2358.49	2025.40
SO289-40830	162.8	2306.37	1978.87
~~64PES03-24~~			
SO289-40968	158.9	2324.39	1962.85
64PES03-26-5-2	173.2	2307.75	2069.59
64PES03-8-5-11	164.5	2299.40	1999.57
SO289-40047	195.6	2281.06	2181.95
NUTSLAB02	162.5	2358.48	2021.76
SO289-40776	165.6	2284.92	1985.42
64PES03-18-4-2	168.1	2307.89	2025.10
64PES03-60-6-2	174.1	2304.26	2070.25
64PES03-14-4-8	167.2	2302.43	2017.79
SO 289 -41278	184.1	2319.98	2145.06
NUTSLAB03	163.1	2357.63	2018.77
64PES03-54-4-5	173.1	2304.13	2059.32
SO289-40243	183.2	2392.44	2199.75
64PES03-37-6-8	167.4	2302.22	2010.21
64PES03-41-4-5	172.4	2302.72	2051.53
SO289-41097	181.9	2353.44	2155.34
NUTSLAB04	163.8	2354.11	2019.27
CRM-189-0330-2	165.4	2195.05	1761.24

NOTES

Almost no headspace - looks like no grease (esp. stopper)

Little headspace - some grease
Beautiful ♡
Little headspace - grease ok.

Little headspace - grease ok. (all like this unless diff.) ↓

500 mL bottle

500 mL bottle

Elastic band instead of tape

⚠ FORGOT GAS → DIC NOT FULL / TA OK.

SAMPLE	EMF 1st/mV	TA	DIC	NOTES
64PE503-52-6-8	166.6	2303.64	1999.26	500 mL bottle
64PE503-11-4-5	166.6	2295.87	1996.07	
64PE503-65-1-11	162.1	2298.33	1959.74	
S0289-41162	185.1	2315.91	2135.88	
64PE503-4-[illegible]-1-8	167.1	2299.71	2000.37	⚠ All DIC increments = 0 after t = 4 min
NUTSLAB05	164.1	2357.38	2019.37	" " " " "
CRM-189-0882-01	167.1	2195.41	1908.07	" " " " "
				End TCT = 16.3

- - - - - - - - - - - - - - - -

28/08/2022 ↳

64PE503 + S0289

Acid lines clear, acid batch from 26/08/22
Checked electrode solutions
Coulometer cell: #1 + green-yellow top
Allocated coulometer port (#1)
Method: 3C_standard.mth

KILLED CELL

SAMPLE	EMF 1st/mV	TA	DIC	NOTES
JUNK05	Accidentally pressed "BLANK" →			ABORTED
JUNK06	"DO NOTHING" - need to empty stripper			
JUNK07	180.4	2352.48	2170.57	
JUNK08	180.2	2351.47	2166.80	
JUNK09	180.2	2355.04	2164.87	

Stopped.

LD, YO

17/10/2022

- Acid batch 11/10/2022
- Rinsing solution 11/10/2022.
- Electrode stable + filled I/O solutions
- Coulometer cell: cap = *** gellow + green
  cell = #1
- cleared acid lines
- Allocated coulometer port (#1)
- Transmission: 99.9 - 100.0 %
- Method: 3C standard
- KILL + START CELL
- NEW BATCH OF NUTS WATER (12/10/2022)

SAMPLE	/mV 1st EMF	TA	DIC	NOTES
JUNK01	165.4	2320.07	~~1673~~ 1639.16	DIC pipette
JUNK02	165.6	2320.07	2081.19	
JUNK03	165.3	2320.60	2072.75	
JUNK04	165.2	2319.96	2068.56	
JUNK05	165.2	2320.83	2071.32	
CRM-189-0656-01	161.5	2195.23	1915.54	
NUTSLAB01	160.7	2352.60	2035.58	
64PE503-50-4-2	169.2	2303.42	2069.38	
S0289-41111	182.9	2368.51	2212.98	
64PE503-56-4-5	168.1	2301.98	2055.31	
S0289-40037	168.9	2259.02	2026.85	
64PE503-27-5-2	168.9	2308.08	2062.57	
NUTSLAB02	160.6	2353.80	2032.25	
S0289-40222	180.4	2374.67	2200.35	
64PE503-56-4-8	161.8	2295.37	2004.12	
S0289-41287	154.4	2319.02	1941.08	
64PE503-41-4-8	162.9	2302.33	2015.49	
S0289-40027	192.1	2278.48	2177.77	
NUTSLAB03	160.7	2353.14	2035.39	
64PE503-41-5	166.5	2311.62	2052.89	
S0289-40216	177.4	2391.66	2193.96	
64PE503-24-3-5	162.4	2300.62	2010.46	
S0289-41223	175.1	2259.98	2058.78	
S0289-40237	156.2	2265.32	1926.46	

New rinsing solution 17/10/2022 (20 L)

T changed tubing

didn't empty AT completely -> leak in tubing from 6 to 11

Sample	/mV 1st EMF	TA	DIC	Notes
NUTSLAB04	160.9	2354.09	2030.77	
S0289-40050	192.1	2282.70	2177.97	
64PE503-66-5-5	168.7	2307.49	2062.41	
64PE503-48-4-5	169.5	2304.68	2061.97	
64PE503-61-6-2	170.3	2302.34	2069.83	
S0289-40352	160.4	2267.30	1965.48	
NUTSLAB05	160.9	2352.96	2029.07	
S0289-41224	180.1	2236.61	2061.01	
S0289-41136	162.8	2302.42	2002.80	
S0289-41261	178.4	2356.73	2171.16	
CRM-189-0656-02	160.2	2193.22	1897.29	
CRM-189-0965-01	161.8	2195.85	1907.66	

18/10/2022

LD, YO

- Acid batch 11/10/2022
- Rinsing solution 17/10/2022
- NUTS water 12/10/2022
- Stable electrode + filled I/O solutions
- Coulometer cell: cap = *** yellow + green
  cell = #1
- Cleaned acid lines
- Allocated Coulometer port (#1)
- Transmission 99.8 - 100.0%
- Method: 3C standard
- KILL + START CELL

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	168.6	2320.94	1069.05	⚠ DIC pipette did not
JUNK02	185.8	0.00	2102.66	⚠ TA pipette did not
JUNK03	169.9	2305.50	2096.08	
JUNK04	168.4	2321.48	2096.91	
JUNK05	168.2	2321.89	2089.77	
JUNK06	168.3	2322.51	2093.97	
JUNK07	168.2	2322.58	2092.77	
CRM-189-025-01	161.9	2195.30	1920.42	
NUTSLAB01	161.0	2353.76	2035.49	
40937-50285	177.9	2384.01	2191.43	
64PE503-14-4-2	167.8	2303.68	2055.92	
50289-40981	178.7	2391.39	2208.83	
64PE503-9-511	161.6	2296.67	1999.03	
50289-40984	178.9	2377.90	2193.67	
NUTSLAB02	161.0	2353.00	2038.07	
64PE503-25-4-2	168.7	2306.82	2060.52	
64PE503-1-1-2	164.4	2302.85	2031.63	
64PE503-27-5-5	168.9	2308.64	2061.96	
50289-40998	151.4	2286.50	1894.90	
50289-40712	158.1	2290.43	1956.80	
NUTSLAB03	161.1	2353.18	2036.00	
50289-40793	177.8	2379.13	2185.08	
50289-41099	184.6	2326.41	2177.03	
50289-40979	177.6	2363.99	2168.20	
50289-40280	182.6	2260.08	2104.19	

empty -> changed valve 11, now seems to work
empty -> fixed valve 5 (1 cable disconnected)

Samples	EMF 1st /mV	TA	DIC	NOTES
50289-41076	177.9	2379.59	2180.37	
NUTSLAB04	161.2	2354.41	2036.56	
CRM-189-071-01	161.9	2193.88	1910.74	

19/10/2022

LD, YO

- Acid batch 11/10/2022
- Rinsing solution 17/10/22
- NUTS 12/10/22
- Stable electrode + filled I/O solutions
- Coulometer cell: cap = *** Y + G
  cell = #1
- Cleaned acid lines
- Allocated coulometer port (#1)
- Transmission: 99.9 – 100.2%
- Method: SC standard
- KILL + START CELL

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	166.9	2323.82	2088.82	
JUNK02	166.9	2321.96	2088.61	
NUCRM-189-0293-01	161.6	2192.19	1917.92	
NUTSLAB01	160.9	2351.81	2036.97	
64PE503-10-5-5	169.2	2299.44	2064.49	
S0289-40042	183.2	2292.36	2124.10	
64PE503-68-6-8	158.4	2297.12	1982.10	
64PE503-27-5-11	/	2304.80	2024.03	
S0289-41079	179.4	2382.04	2208.64	
NUTSLAB02	160.9	2352.53	2040.41	
S0289-40060	180.8	2271.17	2103.71	
S0289-40989	173.8	2269.37	2066.72	
64PE503-19-4-8	162.8	2300.21	2012.37	
64PE503-34-45	168.8	2304.30	2062.93	
S0289-41277	178.3	2353.80	2161.01	
NUTSLAB03	160.9	2352.72	2038.07	
64PE503-37-6-5	169.7	2302.81	2063.71	
S0289-40813	179.9	2361.58	2183.79	
64PE503-62-6-5	167.8	2301.52	2053.40	
S0289-40324	166.5	2260.63	2002.32	
S0289-30359	177.9	2380.65	2188.59	
NUTSLAB-04	161.1	2353.31	2032.47	
64PE503-49-1-2	167.2	2300.89	2044.12	
S0289-40716	155.4	2302.77	1945.13	
S0289-40992	168.1	2282.47	2030.56	
S0289-40942	178.7	2386.60	2201.28	

Samples	EMF 1st /mV	TA	DIC	NOTES
64PE503-54-4-11	162.6	2299.39	2011.26	
~~NUTSLAB05~~				
S0289-40977	177.2	2351.34	2154.80	
64PE503-58-4-8		2292.92	1983.92	
NUTSLAB05	160.9	2352.79	2033.66	TCT: 14.8
CRM-195-0235-01	162.7	2201.22	1926.84	

→ elastic band broken → TA and DIC OKAY

→ bottle popped, DIC only 1 rinse

→ DIC took 11 min

LD, I/O 20/10/2022

- New acid batch 20/10/2022
- Rinsing solution 17/10/2022 + refilled 10L after JUNK01
- NUTS 12/10/22
- Stable electrode + filled I/O solutions
- Coulometer all: cap: ~~X~~ ~~XH~~ Y + G
  cell: #1
- Cleared acid lines
- Transmission 99.9 - 100.1 %
- Allocated coulometer port (#1)
- Method: 3C standard
- KILL + START CELL

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	169.4	2325.46	2110.89	
JUNK02	169.3	2325.39	2107.50	
JUNK 03	169.2	2326.39	2106.79	
CRM-195-0439-01	162.6	2199.04	1932.11	
NUTSLAB01	160.8	2352.08	2033.38	
64PE503-28-5-2	167.1	2313.28	2057.52	Also called 27-5-2
S0289-40063	195.1	2259.40	2181.40	
S0289-40351	167.2	2249.60	2003.43	
64PE503-52-6-2	168.5	2300.63	2057.59	
S0289-41139	152.2	2325.22	1972.28	
S0289-41242	178.0	2390.73	2199.45	
NUTSLAB02	160.8	2352.13	2034.07	
64PE503-54-1-8	162.6	2297.58	2008.61	
64PE503-26-5-5	169.9	2303.95	2066.15	
S0289-41250	178.8	2387.34	2201.02	
S0289-41066	183.3	2383.09	2224.65	
64PE503-60-6-5	170.2	2302.69	2068.33	
NUTSLAB-03	160.9	2351.69	2030.16	
64PE503-11-4-8	169.2	2300.41	2058.02	
S0289-40246	183.6	2335.26	2179.20	
64PE503-53-4-2	~~2301.60~~ 169.0	~~2058.09~~ 2001.60	~~2301.~~ 2058.09	← Sample
S0289-40357	156.9	2310.45	1951.87	
64PE503-127-2	167.7	2303.86	2049.25	
NUTSLAB04	161.1	2353.28	2032.17	
64PE503-57-3-2	169.4	2301.42	2059.79	

Samples	EMF 1st mV	TA	DIC	NOTES
S0289-41020	152.6	2300.11	1925.94	← 1st DIC result: 55558, 2nd .. .. = 55519
S0289 40106	175.7	2245.92	2049.18	
64PE503-32-3-5	163.6	2302.81	2016.31	
S0289-40085	183.8	2351.81	2192.94	
NUTSLAB05	161.2	2352.67	2032.06	
CRM-195-0455-01	163.0	2200.84	1924.75	
				TCT: 15.8

↓ Red tape
had the rubber band off of it from the storage box. I added rubber on it the day after

// same: rubber off Red tape

LD, VO

21/10/2022

- Acid batch 20/10
- Rinsing solution 20/10 + topped up 10L after JUNK01 *1 *2 after 4.28-5-8
- NUTS 12/10
- Stable electrode + filled I/O solutions
- Coulometer cell: cap: *** G+Y
  cell: #1
- Cleaned acid lines
- Transmission 99.9-100.0%
- Allocated coulometer port (#1)
- Method: 3C standard
- Kill + start cell

SAMPLE	EMF mV	TA	DIC	NOTES
JUNK 01	168.9	2325.45	2107.93 *1	⚠ Forgot to
JUNK 02	168.9	2326.12	2105.46	
CRM-189-0236-01	162.3	2191.44	1915.08	
NUTSLAB01	161.4	2350.95	2035.67	
S0289-41194	180.2	2365.58	2190.84	
S0289-41191	151.4	2296.48	1894.69	
S0289-40530	194.9	2281.72	2196.86	
64PE503-54-4-2	169.4	2299.83	2060.77	
S0289-40996	155.7	2322.32	1960.85	
NUTSLAB02	161.4	2350.97	2030.48	
64PE503-31-6-5	163.6	2296.75	2009.32	
64PE503-60-6-2	171.0	2302.38	2071.89	
S0289-40549	163.4	2336.49	2036.15	
S0289-41297	180.0	2360.99	2181.81	
64PE503-28-5-8	164.4	2299.36	2020.00	
~~64PE503-68-6-5~~	~~*2 Topped up 10L rinsing solution~~			
NUTSLAB03	161.5	2351.27	2029.98	
64PE503-68-6-5D	163.2	2316.99	2027.19	
S0289-40698	181.4	2371.79	2200.18	
64PE503-12-7-2	168.3	2301.63	2049.72	
64PE503-46-4	162.0	2296.35	1995.70	Rubber of the stopper
64PE503-56-4-2	169.3	2299.24	2053.67	t=5, t=6, increment=0
NUTSLAB04	161.6	2351.80	2028.49	
S0289-40611	163.6	2279.09	1985.32	
S0289-40499	157.1	2307.51	1956.81	
64PE503-58-4-5	170.1	2300.70	2058.26	

SAMPLE	EMF mV	TA	DIC	NOTES
64PE503-66-5-8	158.9	2294.39	1970.55	
64PE503-14-4-11	164.6	2299.82	2017.31	
64PE503-47-4-11	161.5	2294.41	1988.69	← t=6,7,8 inc=0 / t=9 inc=1
64PE503-26-5-8	163.9	2301.27	2010.72	
NUTSLAB05	161.6	2352.37	2028.51	
CRM-189-0526-01	162.6	2194.01	1908.34	
CRM-189-0526-02	161.9	2195.98	1925.25	← t=6,7,8,9, inc=0 ⚠
				t=10 inc 2143
				t=11 inc=

change titration parameters -> first increment = 0.600

Message "already in database" -> duplicate?

← not crossed

, t:7 inc:39

22-10-22

YO

Acid batch 20/10

Rinsing solution 20/10

NUTS : 12/10

Stable electrode, Filled both I/O solutions

Coulometer cell= cap * * * Green and yellow

cell #1

Cleaned acid line

Transmission 99.9- 100%

allocated coulometer cell #1 port

Method 3C standard

Kill + start cell : 22-10-22

Samples	1st EMF mV	TA	TIC	NOTES
JUNK 01	168.4	2326.76	2106.18	
JUNK 02	168.4	2326.00	2097.64	
JUNK 03	168.3	2325.58	2094.06	
CRM-189-0592-01	162.8	2192.28	1921.40	
NUTSLAB 01	161.8	2350.22	2036.84	
64PE503-13-6-8	164.4	2297.19	2017.46	
64PE503-47-4-2	169.9	2300.85	2065.11	
64PE503-66-5-2	169.8	2302.76	2064.79	
S0289-41014	172.4	2274.98	2049.66	
S0289-41038	160.5	2326.40	1995.81	
64PE503-69-4-8	160.4	2295.00	1983.11	
NUTSLAB 02	161.8	2350.91	2030.95	
S0289-40905	177.9	2361.38	2165.52	
S0289-40202	168.1	2243.85	1996.06	
64PE503-35-6-8	164.3	2299.02	2013.50	
64PE503 57-3-5	170.4	2298.49	2060.54	
S0289-40130	182.2	2375.10	2202.96	
NUTSLAB 03	161.9	2351.11	2029.80	
64PE503-65-2-2	171.1	2302.71	2069.22	← wrote 65- 2-1
64PE503-56-4-5D	169.6	2298.38	2054.06	
S0289-40920	171.5	2267.04	2036.37	
S0289-41212	161.4	2305.55	1985.78	
S0289-40139	179.4	2247.93	2070.05	
NUTSLAB 04	162.0	2350.53	2028.83	
64PE503-54-4-1-D	163.9	2297.89	2008.95	
S0289-41186	170.9	2323.46	2073.77	
S0289-41182	161.1	2324.15	1994.[illegible]	
64PE503-28-5-11	165.0	2299.25	2016.29	

Samples	EMF 1st mV	TA	TIC	NOTES
64PE503-25-4-5	169.8	2303.85	2057.78	↓ t=5, inc=7600
NUTSLAB 05	162.0	2351.65	2025.65	t=6 → 1/min, inc=0
~~CRM-189-0467~~				
NUTSLAB 06	162.1	2351.97	2025.57	
CRM 189-0467-01	163.0	2192.89	1908.09	
CRM-189-0467-02	162.6	2193.47	1907.59	

YO

24/10/22

Acid batch 20/10
Rinsing sol 20/10
NUTS 12/10
Stable electrode - filled O/i solutions
Coulometer cell G+Y ***
Cleaned acid line
Transmission 100%
allocated coulometer #1
Method 3C standard
Kill + Start cell 24/10/22

Samples	ENF 1st mV	TA	BIC	NOTES
JUNK01	171.1	2329.06	0	→ coulometer counts
JUNK02	171.0	2329.94	2123.76	
JUNK03	170.9	2327.47	2105.51	
JUNK04		2328.06	2103.80	
CRM-195-0300-d	164.8	2198.15	1927.07	
NUTSLAB01	162.8	2350.96	2028.32	
S0289-40158	194.4	2272.14	2171.39	
S0289-40524	182.2	2298.82	2129.67	
S0289-41005	180.9	2393.97	2205.26	
64PE503-22-4-8	165.6	2300.80	2016.82	
64PE503-53-4-9	164.8	2295.72	2007.23	Red tape → see previous samples
64PE503-18-4-8	165.7	2299.34	2016.50	
NUTSLAB02	162.8	2351.09	2029.24	
64PE503-24-5-11	165.6	2298.57	2016.64	
64PE503-50-4-8	163.6	2293.45	1995.21	
64PE503 61-6-11	164.1	2296.72	2001.65	
S0289-40131	185.2	2354.14	2195.52	
S0289-41209	171.9	2276.32	2038.31	
S0289-40149	184.1	2370.96	2206.27	
NUTSLAB03	162.8	2351.57	2025.16	
64PE503-41-4-2	171.8	2298.64	2062.88	
64PE503-11-4-11	171.2	2298.91	2057.61	
64PE503-68-06-11	160.4	2295.57	1969.94	
S0289-41208	173.8	2267.37	2044.59	
S0289 40622	180.1	2378.19	2185.44	
64PE503-2855	167.3	2303.03	2028.55	
NUTSLAB04	162.5	2355.35	2024.49	
CRM-195-0410	164.6	2198.69	1924.06	

display OFF/Blank. turned off coulometer → then on. start software all over again.

25/10/22

Yo

Acid batch 20/10
Rinsing solution 21/10
NUTS 12/10
electrode: stable, Filled 1/0 solution
coulometer cell G×4 ***
Cleared acid line
Transmission 99.9 – 100%
Allocated coulometer cell #1
Method 3C standard
Kill + start cell

Samples	EMF in mV	TA	DIC	NOTES
JUNK01	170.6	2326.69	2104.52	
JUNK02	170.6	2330.00	2105.73	
JUNK03	170.5	2327.35	2102.58	
JUNK04	170.5	2328.51	2100.51	
CRM-189-0897-01	163.9	2192.14	1913.88	did not write-01
NUTSLAB01	162.6	2353.34	2030.34	
S0289-41206	186.1	2239.02	2093.62	
S0289-40525	175.3	2266.55	2054.48	
64PE503-2-5-9	163.1	2293.74	1994.36	
64PE503-53-4-6	170.9	2300.18	2059.88	Red tape
64PE503-25-4-8	165.9	2297.05	2018.20	
S0289-40597	182.1	2296.35	2124.17	
NUTSLAB02	162.7	2352.14	2027.52	
S0289-40138	193.4	2266.08	2161.62	
64PE503-56-4-11	163.8	2295.20	2001.33	
S0289-40693	179.9	2382.37	2187.64	
64PE503-8-5-2	169.8	2304.93	2055.81	double check the samples
64PE503-28-5-2-D	169.6	2304.58	2050.27	double check the samples
64PE503-1-1-11	163.2	2295.05	1995.00	
NUTSLAB03	162.4	2268.92	2028.48	Bottle popped
NUTSLAB04	162.6	2350.27	2023.18	
S0289-40133	182.0	2277.26	2104.59	
S0289-41004	179.9	2374.54	2183.43	
64PE503-46-4-2	171.1	2302.00	2061.40	
64PE503-49-1-11	162.9	2292.83	1990.08	
64PE503-32-3-2	166.7	2299.77	2024.54	
NUTSLAB05	162.4	2351.77	2023.34	
64PE503-47-48	162.8	2293.76	1987.52	

Samples	EMF in mV	TA	DIC	Notes
S0289-41303	166.3	2305.39	2020.13	
S0289-40999	152.8	2276.60	1880.36	
NUTSLAB06	163.3	2350.50	2027.97	
CRM-189-0352-01	163.6	2192.17	1903.75	

in Edit sample list

TA pipette ~90% filled.

27/10/22

YO

Acid batch 20/10
Rinsing solution 25/10/22 Ro water + 40g NaCl + 10L
NUTS 12/70
Electrode : stable /// filled 1/0 solution
Cleaned acid line
Coulometer cell G+Y * - *
transmission 99.9_ 100%
Allocated coulometer cell #1
Method 3C Standard
Kill + Start cell

Samples	EMF 1st mV	TA	DIC	Notes
JunK 01	169.1	2325.42	2094.17	
JunK 02	169.1	2329.39	2096.20	
JunK 03	169.2	2325.08	2092.49	
CRM-195-0332	164.8	2197.50	1925.97	
NUTSLAB 01		2351.39	2025.57	
S0289-41187	161.7	2316.47	1992.23	
S0289-40469	175.9	2257.85	2050.99	
S0289-40613	159.6	2294.78	1957.76	
64PE503-12-5-12	163.1	2292.43	1991.36	
64PE503-19-4-2	167.5	2299.11	2031.85	
S0289-41305	160.2	2327.73	1987.46	
NUTSLAB 02	162.4	2349.93	2024.21	
64PE503-53-4-11	168.0	2294.42	2033.24	
64PE503-65-1-8	163.4	2291.90	1955.73	
64PE503-22-4-2	166.2	2257.95	2060.71	
64PE503-42-4-5	171.3	2297.95	2060.71	
S0289-41013	175.9	2268.03	2061.75	
S0289-40152	186.4	2328.07	2179.89	
NUTSLAB 03	162.4	2350.20	2024.98	
64PE503-53-4-8	164.7	2294.61	2007.55	
S0289 40172	180.0	2386.28	2191.82	
S0289-40513	180.3	2372.46	2186.64	
64PE503-13-6-2	170.4	2302.30	2056.12	
S0289-40578	181.5	2372.82	2190.05	
NUTSLAB 04	162.4	2349.71	2023.42	
64PE503-65-1-11	159.3	2293.06	1961.24	
S0289-41193	180.6	2375.52	2184.65	
S0289-40588	181.2	2364.21	2181.91	

Samples	EMF 1st mV	TA	DIC	NOTES
S0289-41291	181.4	2382.44	2199.79	
NUTSLAB 05	162.4	2350.13	2023.52	
CRM-195-0354	164.9	2196.24	1922.23	

28/10/22

Yo

Acid batch: 28/10/22
Rinsing solution 25/10/22
Nuts :12/10
Electrode stable Filled 0/1 solution. Outer solution less than usual.
Cleared acid line
Coulometer cell G+Y ***
Allocated coulometer cell #1
transmission 99-9 -100%, 100.1%
Method 3C Standard
Kill cell + start cell.

Samples	EMF 1M mV	TA	DIC	Notes
Junk 01	167.9	2326.97	2095.48	
Junk 02	168.2	2329.38	2089.64	
Junk 03	168.1	2329.84	2089.79	
CRM-189-0161-d	163.6	2192.86	1915.83	
NUTSLAB01	162.0	2351.65	2028.69	
S0289-40605	172.1	2262.78	2035.94	
S0289-40983	181.3	2384.58	2201.71	
64PE503-25-4-11	165.7	2300.19	2023.27	
64PE503-21-3-2	165.3	2303.31	2017.81	
64PE503-35-6-5	166.6	2301.25	2028.52	
NUTSLAB02	162.1	2353.35	2025.91	
S0289-40659	180.8	2373.57	2184.48	
S0289-41198	187.8	2346.60	2205.05	
S0289-40464	183.9	2327.13	2165.60	
64PE503-12-7-5	169.6	2302.01	2051.84	
64PE503-21-3-2-D	165.4	2302.61	2021.82	
NUTSLAB03	162.1	2352.94	2024.71	
64PE503-53-4-5	170.8	2300.88	2059.39	Red tape
64PE503-24-5-5	170.1	2305.46	2056.07	
64PE503-53-4-3	170.9	2301.88	2060.70	Red tape
S0289-41309	152.2	2305.95	1892.11	
S0289-41171	169.5	2289.27	2032.77	
NUTSLAB04	162.2	2353.50	2023.18	
S0289-40820	180.1	2389.53	2196.04	
S0289-40126	180.2	2392.00	2199.01	
S0289-41293	181.6	2383.13	2201.27	
S0289-41003	179.9	2360.56	1183.82	is it too low or Problem with DIC?
64PE503-10-5-2	171.5	2302.14	784.99	→ DIC filled normally

Samples	EMF 1M mV	TA	DIC	Notes
NUTSLAB05	162.2	2353.58	577.84	

↓ H_3PO_4: only a small volume was left in the bottle, so the tube could not reach it.

Filled the acid with a solution made on 06/09/22.
then I did:
- DIC add acid 4 or 3 times to make sure that no bubble was in the tube.
- Drained DIC stripper.

Junk 04	168.4	2333.22	2089.81	
NUTSLAB06	162.2	2353.98	2024.70	
CRM-189-0406-01	162.8	2194.63	1910.21	

...rements (counts all the same not decreasing.

31/10/22

LD

Acid batch: 28/10/22
Rinsing solution: 25/10/22
Nuts: 31/10/22
Electrode stable, filled I/O solutions
Cleared acid lines
Allocated coulometer pot (#1)
Transmission 99.9 - 100.1% / Coulometer cell: Y.G *** + #1
Method: 3C standard
Kill + start cell

⚠ FORGOT TO ~~ADD~~ REMOVE 1HR TIME

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	173.1	2327.71	2141.60	
JUNK02	173.0	2328.14	2132.12	
JUNK03	172.9	2326.96	2123.45	
JUNK04	173.0	2329.51	2120.52	
JUNK05	172.9	2329.07	2120.25	
CRM-189-1091-01	164	2195.50	1917.35	
NUTSLAB01	164.9	2350.78	2040.98	
S0289-40855	159.9	2300.50	1963.99	
S0289-41308	153.4	2305.54	1902.69	
S0289-40975	153.9	2298.87	1903.30	
S0289-41298	181.10	2349.80	2165.14	
S0289-40003	196.8	2279.88	2185.25	
NUTSLAB02	165.1	2350.95	2039.65	
S0289-40638	171.4	2268.66	2022.21	
S0289-41039	159.6	2324.52	1975.87	
S0289-41296	181.7	2378.53	2188.90	
S0289-41300	181.4	2285.64	2104.81	
S0289-40967	158.9	2325.46	1983.07	
NUTSLAB03	165.05	2350.77	2033.75	
S0289-40159	194.9	2269.66	2166.75	
S0289-41290	183.6	2379.58	2202.59	
S0289-41033	164.2	2314.31	1999.50	
S0289-40649	180.9	2388.34	2186.62	
S0289-41185	166.2	2310.29	2007.59	
NUTSLAB04	165.2	2348.17	2029.67	

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
S0289-40146	181.00	2393.05	2190.58	
S0289-41304	163.6	2324.04	2000.48	⚠ Alk curve
S0289-40240	180.9	2398.19	2191.09	
S0289-41299	180.9	2321.42	2129.41	
S0289-41294	183.1	2374.23	2190.96	
NUTSLAB05	165.3	2349.05	2031.78	
CRM-189-0839-01	164.9	2195.30	1906.16	

⚠ Alkalinity curve not great

⚠ Alkalinity curve not great

01/11/2022

LD

Acid batch: 28/10/22
Rinsing solution: 25/10/22
Nuts: 31/10/22
Electrode stable, filled I/O solutions
Cleared acid lines
Allocated coulometer port (#1)
Transmission 99.8-100.2%, cell ~~###~~ Y+G + #1
Method 3C standard
Kill + start cell

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	172.2	2328.78	2123.14	
JUNK02	172.2	2328.01	2116.38	
JUNK03	172.3	2327.57	2118.05	
CRM-195-0288-01	166.2	2204.44	1935.56	
NUTSLAB01	165.6	2349.70	2042.72	
64PE503-19-4-11	166.4	2299.32	2016.78	
S0289-41266	184.1	2381.95	2212.65	
S0289-40162	174.2	2240.54	2021.64	
64PE503-20-4-5	166.4	2300.38	2018.90	
64PE503-41-4-5->	171.6	2300.52	2055.45	
NUTSLAB02	165.6	2350.44	2038.79	
S0289-41175	165.2	2320.59	2013.64	
S0289-40859	157.6	2320.21	1950.33	
64PE503-12-7-11	164.4	2293.15	1994.47	
64PE503-8-5-8	165.2	2293.99	2001.28	
S0289-03-04-22-21-00	153.6	2303.41	1895.55	
NUTSLAB03	165.6	2352.79	2038.19	
S0289-40118	156.50	2275.69	1938.50	
S0289-41046	/	2322.57	1937.13	
S0289-40679	164.6	2291.73	1985.33	
S0289-40950	182.8	2325.18	2146.37	
64PE503-42-4-2	172.9	2303.78	2062.78	
NUTSLAB04	165.7	2349.79	2034.73	
S0289-41189	157.1	2327.40	1945.11	
64PE503-66-5-8	161.8	2295.10	1970.83	
S0289-40166	159.7	2283.32	1937.38	

→ order switch

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
S0289-40326	164.1	2269.38	1964.81	Elec. tape off
64PE503-17-3-8	168.1	2303.42	2024.58	
NUTSLAB05	165.8	2350.01	2035.38	
CRM-195-0444.01	166.5	2200.61	1925.34	

⚠ Named "46-..."
⚠ Warning for duplicate

03/04/2022 21:00 UTC

03/04/2022 21:00 UTC

Red tape

Red tape + ⚠ Duplicate warning

02/11/2022

LD, AR

Acid batch: 28/10/2022
Rinsing solution: 01/11/2022
Nuts water: 31/10/2022
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1)
Transmission 99.9-100.2%, cell: #1 + AAA Y+G
Method: 3C standard
Kill + start all

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	170.6	2329.68	2108.81	
JUNK02	170.8	2327.53	2103.70	
JUNK03	170.8	2328.32	2101.95	
CRM-189-0778-01	165.4	2193.13	1919.16	
NUTSLAB01	165.8	2349.40	2042.22	
64PE503-12-5-6	171.2	2302.81	2055.51	
S0289-40668	180.6	2285.80	2100.67	
S0289-40741	181.1	2387.02	2191.46	
S0289-40760	161.1	2292,85	1961,31	Alk not great
S0289-40710	167.8	2273,25	1999,46	
NUTSLAB02	165.7	2350.50	2037.02	
64PE503-12-7-8	164.9	2295.13	1996.10	
S0289-40832	160.9	2311.07	1962.45	Alk not great
S0289-40887	182.6	2373.49	2192.07	Elec. tape off
S0289-40179	183.3	2383.24	2201.77	
S0289-40708	183.6	2230.67	2062.02	
NUTSLAB03	166.0	2349.74	2036.16	
S0289-41307	166.1	2293.66	1989.94	
S0289-40828	174.9	2266.15	2037.49	
64PE503-20-4-2	167.7	2303.11	2020.14	
S0289-41047	156.6	2307.68	1922.44	Alk not great
S0289-41045	158.6	2323.64	1950.24	Alk not great
NUTSLAB04	166.1	2350.18	2035.29	
64PE503-23-3-5	167.6	2303.10	2017.67	
S0289-41301	178.1	2273.54	2066.92	
S0289-40960	165.4	2313.02	1999.27	
S0289-40952	178.3	2269.99	2063.15	
S0289-40965	163.9	2316.98	1992.66	

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
S0289-40837	181.2	2373.44	2172.00	
NUTSLAB05	166.3	2349.74	2034.34	
CRM-189-0290-01	166.9	2191.19	1908.67	

03/11/2022

LD

Acid batch: 28/10/2022
Rinsing solution: 01/11/2022
Nuts water: 31/10/2022
Electrode stable, filled I/O solutions
Cleared acid lines
Allocated coulometer port (#1)
Transmission 99.9-100.1 %, cell #1 + *** Y+G
⚠ cathode solution 120 mL
to see if better increments end of day

Method: 3C standard:
Kill + start cell

+ TA param. → now "constant increments", before "add initial shot" but always 0.150 so should make no difference

SAMPLE	EMF /mV	TA	DIC	NOTES
JUNK01	173.9	2327.37	2118.76	
JUNK02	173.9	2329.53	2113.58	
JUNK03	174.1	2327.40	2113.05	
CRM-195-0304-01	167.7	2201.78	1930.24	
NUTSLAB01	166.9	2350.20	2038.41	
S0289-40041	188.2	2289.65	2139.12	
64PES03-4-1-2	172.0	2308.62	2055.19	
S0289-40688	158.8	2346.27	1960.30	
S0289-40058	187.7	2364.49	2202.53	
S0289-41125	176.9	2268.90	2049.27	
NUTSLAB02	167.1	2349.68	2036.49	
64PES03-42-4-8	167.9	2296.90	2008.79	
S0289-40703	185.0	2328.71	2147.93	
S0289-41168	156.0	2294.02	1891.92	
S0289-41089	169.6	2306.29	2022.83	
S0289-40941	184.4	2387.28	2202.18	
NUTSLAB03	167.4	2350.33	2034.79	
S0289-41077	184.1	2410.66	2216.84	
S0289-40641	159.8	2338.69	1960.37	
S0289-41110	185.5	2394.67	2211.65	
S0289-40056	161.1	2277.94	1926.08	

SAMPLE	EMF /mV	TA	DIC	NOTES
64PES03-65-1-5	175.4	2303.99	2067.20	
NUTSLAB04	167.3	2352.67	2032.86	
S0289-41094	162.2	2303.50	1947.72	TA curve not great
~~S0289-40976~~				
~~S0289-40673~~				
S0289-41084	183.20	2294.54	2104.12	
~~S0289-40673~~	~~156~~			
~~S0289-~~				
S0289-40976	156.45	2297.83	1900.64	TA curve not great
S0289-40673	177.4	2265.92	2042.90	
64PES03-27-5-8	168.8	2302.55	2012.89	
NUTSLAB05	167.3	2348.91	2031.07	
CRM-195-0330-01	168.1	2199.75	1923.55	

Alk curve not great + elect. tape off

Not so great Alk curve

Elec. tape off
Not so great TA curve
Elec. tape off

04/11/2022

LD

Acid batch: 04/11/2022
Rinsing solution: 01/11/2022
Nuts water: 31/10/2022
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1)
Transmission 99.9 - 100.1% , cell #1 *** 1/+6
Method > 3C Standard
Kill + start cell

SAMPLE	EMF 1st / mV	TA	DIC	NOTES
JUNK01	172.6	2321.28	2111.66	
JUNK02	172.8	2322.78	2109.49	
JUNK03	172.8	2322.84	2106.37	
JUNK04	172.8	2324.46	2107.85	
CRM-189-0529-01	166.8	2190.77	1919.71	
NUTSLAB01	166.9	2347.90	2041.60	
S0289-41289	184.9	2382.03	2211.26	
S0289-41257	184.2	2378.66	2203.06	
S0289-40059	189.9	2324.40	2188.75	
GAPES03-10-5-8	167.0	2288.70	2001.80	
S0289-40958	173.8	2275.87	2036.26	
NUTSLAB02	167.1	2346.08	2037.44	
S0289-41306	162.9	2320.76	1982.77	weird TA
S0289-40256	168.1	2250.21	1973.78	
S0289-40349	183.5	2258.58	2084.07	
S0289-40076	184.9	2382.63	2206.48	
GAPES03-9-5-2	167.3	2284.42	1999.03	
NUTSLAB03	167.1	2346.98	~~2034.30~~	2034.30
GAPES03-61-6-8	167.4	2292.99	2005.10	Red tape
S0289-41244	183.6	2386.44	2201.97	
S0289-41153	183.8	2382.31	2196.83	Elec. tape
S0289-41088	175.7	2272.93	2044.91	
S0289-41128	171.9	2300.47	2035.00	
NUTSLAB04	168.1	2343.23	2033.93	Bubbles in acid line → control titrino
S0289-41109	184.9	2388.92	2192.48	
S0289-41137	164.9	2317.17	1995.82	
GAPES03-47-4-5	174.1	2301.06	2060.25	
S0289-41129	168.3	2302.19	2012.19	

SAMPLE	EMF 1st / mV	TA	DIC	NOTES
S0289-40273	188.2	2314.56	2160.00	
NUTSLAB05	167.0	2346.10	2032.74	
CRM-189-1148-01	167.2	2190.74	1911.12	

06 ~~05~~/11/2022

↳

Acid batch: 04/11/2022
Rinsing solution: 04/11/2022
Nuts Water: 31/10/2022
Electrode stable, filled I/O solutions
Cleared acid lines
Allocated coulometer port (#1)
Transmission 99.8-100.2%, same cell
Method 3C standard
Kill + start cell

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	171.1	2324.00	1549.02	⚠ gas/sample lines twisted
	Bubbles in acid lines → control returns			
JUNK02	171.3	2324.81	2097.87	
	↳ Fire alarm tests, stopping			
JUNK01	170.6	2324.29	2100.63	
JUNK02	170.4	2324.82	2094.69	
JUNK03	170.5	2323.30	2094.26	
CRM-195-0418-01	167.6	2195.86	1933.75	
NUTSLAB01	166.4	2348.28	2036.96	
S0289-40978	181.9	2356.16	2166.41	
S0289-40959	168.6	2290.32	2014.03	
S0289-40977	161.1	2314.35	1967.00	Alk ~~not~~ curve not great
S0289-40966	163.2	2318.94	1989.62	" " "
64PE503-66-5-11	161.2	2293.01	1957.61	
NUTSLAB02	166.7	2345.00	2034.38	
S0289-40932	182.4	2361.62	2172.69	
S0289-40551	183.4	2374.88	2189.23	
S0289-41273	191.2	2354.07	2218.70	
S0289-40972	163.1	2285.14	1958.45	Alk curve not great
64PE503-8-5-5	172.9	2302.47	2055.8	
NUTSLAB03	166.9	2345.64	2032.63	
S0289-40980	183.2	2377.16	2189.46	
S0289-40982	184.8	2383.63	2205.66	
S0289-40620	160.1	2324.16	1955.97	Alk curve not great
S0289-41210	172.7	2282.52	2030.14	
64PE503-22-4-2	169.5	2297.45	2022.95	
NUTSLAB04	166.9	2345.15	2031.96	

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
S0289-40946	184.6	2376.97	2198.77	
S0289-41247	183.7	2388.92	2200.04	
S0289-40947	184.3	2362.86	2182.55	
S0289-40333	162.4	2302.19	1956.16	Alk curve not great
64PE503-35-6-11	168.5	2295.05	2012.47	
NUTSLAB05	166.9	2348.33	2029.88	
CRM-195-0437-01	168.1	2197.93	1925.90	

05/11/2022 but fire alarm tests

07/11/2022

L1>

Acid batch: 04/11/22
Rinsing solution : 06/11/2022
Nuts water: 06/11/2022
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1)
T: 99.9 - 100.2%, same cell
Method 3C standard
Kill, start cell

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	172.4	2322.42	2115.17	
JUNK02	172.4	2321.52	2109.82	
JUNK03	172.3	2323.13	2107.95	
CRM-195-0424-01	167.3	2195.96	1932.67	
NUTSLAB01	166.7	2346.99	2041.49	
S0289-40496	175.6	2255.12	2038.39	
S0289-41017	164.6	2322.60	2002.88	Not great curve TA
S0289-40460	183.4	2368.22	2190.53	
S0289-41016	167.5	2301.24	2013.76	
64PES03-46-4-5	174.0	2300.56	2066.52	
NUTSLAB02	167.0	2346.31	2038.62	
S0289-40438	178.8	2255.53	2053.04	
S0289-41140	160.9	2305.32	1951.55	Alk curve not great
S0289-40479	182.75	2379.52	2187.57	
64PES03-61-6-5	175.1	2299.60	2070.14	
S0289-40429	180.3	2269.95	2072.13	⚠ Problem w/ rinse OK.
NUTSLAB03	167.1	2347.53	2038.17	
S0289-40444	168.0	2263.04	1982.38	
S0289-40396	177.9	2265.62	2052.66	
S0289-40392	187.9	2334.47	2178.17	
64PES03-14-4-5	171.2	2298.20	2037.78	
S0289-41096	155.6	2274.01	1880.59	Alk curve not great
NUTSLAB04	167.1	2346.65	2034.55	
S0289-41188	161.3	2354.79	1995.50	Alk. curve not great
S0289-40602	177.6	2262.99	2049.06	
S0289-40567	174.9	2258.70	2027.48	
64PES03-23-3-2	169.2	2298.54	2022.42	
S0289-40419	183.2	2374.42	2185.27	

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
NUTSLAB05	167.2	2346.25	2032.52	
CRM-195-0232-01	167.8	2196.50	1923.89	

rinsing pump -> only rinsed x1 -> unplugged valves + replugged + tests "fill" and "drain" -> now OK

LD 08/11/2022

Acid batch: 04/11/2022
Rinsing solution: 06/11/22 + topped up
Nuts water: 06/11/22
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1)
T: 99.8 - 100.1%
Method 3C standard
Kill + start cell

SAMPLE	EMF 1st /mV	TA	DIC	NOTES
JUNK01	171.1	2322.11	2107.67	
JUNK02	171.1	2323.50	2103.01	
JUNK03	171.2	2323.05	2100.09	
JUNK04	171.2	2323.56	2098.89	
CRM-198-0060-01	170.0	2185.92	1940.25	
NUTSLAB01	166.8	2348.31	2041.37	
S0289-40249	180.2	2263.74	2073.55	
S0289-41018	160.8	2325.35	1974.26	
S0289-40268	184.9	2373.54	2200.66	
S0289-40262	182.9	2383.60	2198.73	
64PE503-66-55	173.7	2304.89	2068.29	Red tape + Duplicate warning
NUTSLAB02	167.1	2346.13	2038.83	
S0289-41087	177.5	2265.67	2052.05	
S0289-41284	162.5	2329.38	1983.35	Alk. curve not great
S0289-40380	161.6	2310.17	1966.37	" " "
S0289-40717	182.6	2377.78	2188.75	
64PE503-19-0-5	169.3	2299.02	2023.35	Missing cast #
NUTSLAB03	167.1	2346.59	2035.84	
S0289-40570	160.1	2322.16	1957.44	Alk curve not great
S0289-41269	187.7	2374.62	2213.87	
S0289-40066	191.9	2255.34	2129.95	
S0289-41138	163.1	2321.74	1984.98	
64PE503-4-1-11	166.9	2293.10	2000.54	
NUTSLAB04	167.1	2347.84	2034.80	
S0289-40276	180.2	2263.67	2065.04	
S0289-40506	183.2	2373.69	2184.97	
S0289-40229	190.6	2260.34	2124.53	
S0289-41283	168.7	2324.94	2028.20	Elec. tape off

SAMPLE	EMF 1s /mV	TA	DIC	NOTES
64PE503-22-4-5	168.4	2299.09	2016.56	
NUTSLAB05	167.1	2348.20	2033.00	
CRM-198-0616-01	170.5	2185.60	1931.75	