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 | |

07/11/2022

↳

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 | |

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

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

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 fries
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 | |
| 64PES03-66-55-D | 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 | |
| 64PES03-19-0.5 | 169.3 | 2299.02 | 2023.35 | Missing cost # |
| 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 | |
| 64PES03-4-1-11 | 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 2nd /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| 64PES03-22-4-S | 168.4 | 2299.09 | 2016.56 | |
| NUTSLAB05 | 167.1 | 2348.20 | 2033.00 | |
| CRM-198-0616-01 | 170.5 | 2185.60 | 1931.75 | |

YO 09/11/22

Acid batch 04/11/22
Rinsing Solution 06/11/22 + topped up
Nuts water 06/11/22
Electrode stable / filled I/O solution / lot of salt outside
Cleaned acid line
Allocated coulometer port #1
T: 99.9 / 100%
Method 3C standard
Kill cell + start

| SAMPLE | EMF | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 169.9 | 2323.46 | 2092.76 | |
| JUNK02 | 169.9 | 2322.70 | 2089.24 | |
| JUNK03 | 170.0 | 2323.50 | 2087.65 | |
| JUNK04 | 170.1 | 2325.35 | 2085.28 | |
| CRM-198-0924 | 170.4 | 2184.17 | 1937.64 | |
| NUTSLAB01 | 166.9 | 2346.90 | 2036.31 | |
| 64PES03-1-2-5 | 171.9 | 2305.83 | 2054.08 | |
| S0289-41106 | 187.0 | 2351.51 | 2189.18 | |
| 64PES03-12-5-2 | 172.6 | 2299.68 | 2052.11 | |
| 64PES0348-4-11 | 165.1 | 2291.40 | 1987.51 | |
| 64PES0341-4-11 | 168.3 | 2295.91 | 2016.61 | |
| NUTSLAB02 | 167.0 | 2348.15 | 2034.59 | |
| S0289-41164 | 179.2 | 2277.99 | 2068.98 | |
| S0289-40224 | 188.4 | 2345.16 | 2190.05 | |
| S0289-40015 | 175.6 | 2272.00 | 2043.98 | |
| S0289-40260 | 162.1 | 2274.46 | 1942.29 | Alk curve not good |
| S0289-41149 | 201.9 | 2280.08 | 2207.00 | " " " " |
| NUTSLAB03 | 167.1 | 2346.17 | 2034.90 | |
| S0289-41165 | 170.6 | 2295.67 | 2028.88 | |
| S0289-40318 | 184.7 | 2261.40 | 2086.89 | |
| S0289-40534 | 191.9 | 2285.96 | 2155.22 | |
| S0289-40232 | 169.4 | 2249.48 | 1978.80 | |
| S0289-40252 | 194.6 | 2260.09 | 2144.02 | Alk curve not that good |
| NUTSLAB04 | 167.1 | 2346.00 | 2032.30 | |
| S0289-41258 | 183.8 | 2378.99 | 2187.97 | |
| S0289-40542 | 161.7 | 2308.04 | 1953.20 | |
| S0289-41163 | 182.1 | 2281.60 | 2092.65 | |
| S0289-40299 | 183.5 | 2370.93 | 2184.76 | |

| SAMPLE | EMF | TA | DIC | Notes |
|---|---|---|---|---|
| S0289-40219 | 183.8 | 2384.39 | 2197.45 | |
| NUTSLAB05 | 166.9 | 2346.57 | 2030.28 | |
| CRM 198-0981-01 | 170.5 | 2183.81 | 1931.41 | |

Yo

11/11/22

Acid batch 04/11/12 + topped up on 11/11/22
Rinsing Solution 06/11/22 + topped up on 11/11/22
Nutswater 06/11/22
Electrode stable / filled 1/0 solution
Cleaned acid line
Allocated colonne For #1
T: 99.9-100 %
Method 3C
Kill + start cell

| Samples | EMF | TA | DIC | Notes |
|---|---|---|---|---|
| JUNK01 | 167.6 | 2325.86 | 2069.37 | |
| JUNK02 | 168.0 | 2319.33 | 2067.68 | |
| JUNK03 | 168.1 | 2322.44 | 2054.03 | |
| JUNK04 | 168.2 | 2321.98 | 2068.15 | |
| JUNK05 | 168.2 | 2320.20 | 2049.89 | DIC Pipette not drain → completely. ~ 1mL of SW was left in the upper part where the SW is disposed |
| JUNK 06 | | | | Abort the Junk. twisted → the tube on the junk bottle was twisted: |
| JUNK07 | 168.2 | 2323.60 | 2012.38 | |
| JUNK08 | 168.3 | 2324.39 | 2042.01 | • I checked the DIC tu if they were pinched or no. |
| JUNK09 | 168.2 | 2323.53 | 2034.68 | |
| JUNK10 | 168.2 | 2324.41 | 2080.05 | • ~1mL of solution still in |
| 11-12-13-~~14~~ | | | | testing pressure → |
| JUNK 14 | 167.6 | 2327.71 | 2055.33 | → DIC emptying all. time |
| JUNK 15 | 173.1 | 2344.67 | 2106.72 | → Filled SW Jerrycan. |
| JUNK 16 | 173.2 | 2345.99 | 2107.82 | → Method 3C: emptying time |
| JUNK 17 | 173.1 | 2344.02 | 2103.38 | → " " " " |
| JUNK 18 | 173.2 | 2346.03 | 2107.93 | → adjusting the pressure while |
| JUNK 19 | 173.2 | 2344.33 | 2105.66 | → DIC pipette emptied in 13 seconds |
| JUNK 20 | 173.1 | 2343.19 | 2105.25 | → same, DIC empty in 13 seconds |
| JUNK 21 | 173.1 | 2343.97 | 2087.54 | → had to adjust the pressure |
| JUNK 22 | 173.1 | 2345.39 | 2102.11 | → DIC drained completly |
| JUNK 23 | 173.2 | 2344.08 | 2094.96 | Pipette → |
| JUNK 24 | 173.1 | 2343.33 | 2104.55 | |
| JUNK 25 | 173.1 | 2342.59 | 2101.73 | |
| JUNK 26 | 1730 | 2342.40 | 2103.99 | |

10/11/22 : N2 maintenance

- DIC not stable
- Enough $H_3PO_4$.
- DIC pipette seem to empty completly ⚠

→ checked the tubings: put them out of the valve and back again.

- Valve 11: cut a small part of the tube. Was completly pinched ↳ from valve 11 → DIC pipette.

- Pressure problem: the speed at which the SW is emptied from DIC Pipette is changing. the valves stop before all the SW is emptied

Slightly increasing the pressure from the vindta (Black controller) to push all SW in stripper.

→ in 3C Method 24 seconds (instead of 18 seconds).
→ 3C Method: 22 seconds
→ 3C Method: 21 seconds. ⚠ Pressure changing again. DIC pipette emptied ~ 3 seconds
→ 3C Method: 20 seconds ⚠ N2 not stable.

DIC pipette is being emptied.

→ DIC empty pipette: 3C Method: restored to 18 seconds.
→ DIC pipette not completely drained.
→ From JUNK 22: nothing has changed in pressure.

→ Add acid on 11/11/22 before JUNK 22

12/11/2022

Yo

Acid batch 11/11/2022
Rinsing solution 11/11/2022
Nuts lab : 06/11
Electrode : stable filled 1/0
Cleaned acid line
Allocated coulometer #1 port
T%: 99.8 - 100%
Method : 3C standard
Kill + start cell

| Samples | Emf | TA | DIC | Notes |
|---|---|---|---|---|
| JUNK01 | 172.6 | 2212.81 | 2126.83 | |
| JUNK02 | 172.7 | 2290.50 | 2122.14 | |
| JUNK03 | 172.7 | 2288.11 | 2121.47 | |
| JUNK04 | 172.8 | 2286.45 | 2121.55 | TA ← too low \| DIC very good |
| CRM-195-0224-01 | 167.9 | 2140.71 | 1931.65 | |
| NUTLAB01 | 166.9 | 2284.06 | 2036.83 | |
| JUNK05 | 172.9 | 2285.30 | 2118.01 | |
| JUNK06 | 172.9 | 2283.78 | 2119.94 | |
| JUNK07 | 172.9 | 2284.07 | 2119.98 | |
| NUTLAB02 | 167.1 | 1724.68 | 2034.37 | → TA pipette not drained completely |
| JUNK08 | 172.9 | 2287.62 | 2116.90 | → adjusted the pressure to drain the pipette |

⚠ TA value stable but very different from the other days.

JUNK : ~ 37 µmol less compared to the other days
NUT : ~ 64 µmol less
CRM 195 : ~58 µmol less

→ I'm not sure what the problem is. Acid line clear, no bubbles/ TA pipette drained completely. HCl is being dispensed. Valves working

. Decided to not any samples.

⚠ While the HCl dispenser was being filled after NUTLAB01 and before running JUNK05, so much bubbles / air was dispensed from the HCl bottle.
→ Tried to fixed it like the usual 'Clean acid line', but nothing happend, ~~acid~~ dispenser was still filled with air.

→ Checked the bottle and what happed was that the tube ~~for~~ (inside the HCl bottle) fell, it was not 'glued' to the lid anymore.
→ changed the tube with a similar tube I took from the magazine, then checked again by dispensing more acid. Problem : less bubbles but not completly gone.
→ I changed the tube from bottle to the titrino; found a spare.
Problem fixed.

check with Sharyn on monday.

Yo

15/11/22

Acid batch 11/11/2022

Rinsing solution 11/11/2022 • topped up $H_3PO_4$

NUTSLAB 06/11

Electrode stable / filled 1/0 solution

Cleaned acid line : ✓

Allocated coulometer port # 1

T% : 99.8 - 100%

Method : 3C standard

Kill + start cell

| SAMPLE | EMF | TA | DIC | Notes |
|---|---|---|---|---|
| JUNK 01 | 173.8 | 2299.05 | 2143.51 | |
| JUNK 02 | 173.7 | 2297.60 | 2140.21 | |
| JUNK 03 | 173.7 | 2299.23 | 2140.35 | |
| JUNK 04 | 173.6 | 2298.48 | 2136.36 | |
| JUNK 05 | 173.9 | 2300.06 | 2137.36 | |
| JUNK 06 | 173.7 | 2297.34 | 2136.68 | |
| JUNK 07 | 173.8 | 2301.96 | 2137.01 | |
| NUTSLAB 01 | 167.4 | 2282.49 | 2031.21 | |
| JUNK 08 | 174.0 | 2295.91 | 2136.51 | |
| CRM-195-0343-01 | 168.7 | 2137.68 | 1928.59 | |
| NUTSLAB 02 | 167.4 | 2284.85 | 2029.39 | |
| 80289-41067 | 184.3 | 2298.73 | 2182.56 | |
| 80289-41019 | 160.8 | 2261.67 | 1958.15 | → Super bad Alk curve |
| 64PE503-48-4-8 | 163.2 | 2228.22 | 1961.18 | |
| 64PE503-42-4-11 | 170.4 | 2058.98 | 2011.16 | Red tape overflowing, not all volume sample was analysed for TA |
| 64PE503-35-6-2 | 173.2 | 2238.0 | 2052.50 | |
| NUTS LAB 03 | 167.6 | 2283.80 | 2031.78 | |
| 64PE503-49-1-5 | 175.1 | 2238.30 | 2062.20 | → a small drop in DIC pipette → to skipper one drop was left. |
| 64PE503-20-4-8 | 168.7 | 2232.64 | 2009.94 | |
| 80289-40997 | 158.9 | 2254.14 | 1933.69 | → bad Alk curve |
| 80289-41007 | 185.0 | 2320.23 | 2201.54 | |
| 80289-41279 | 186.5 | 2224.45 | 2121.08 | |
| NUTSLAB04 | 167.5 | 2282.69 | 2030.10 | |
| 80289-40985 | 185.1 | 2299.27 | 2183.30 | |
| 80289 41002 | 189.6 | 2296.28 | 2203.83 | |
| 64PE503-9-5-5 | 176.0 | 2232.47 | 2063.28 | ← overflow caused by: Rinsing tubing in the pump was too squized. |
| 80289-41062 | 185.4 | 2322.45 | 2198.58 | |
| 80289-40986 | 185.1 | 2280.85 | 2161.93 | |
| NUTSLAB05 | 167.6 | 2283.21 | 2029.98 | |
| 89-41052 | 191.6 | 2260.22 | 2178.87 | |

Cleaned acid line:

with the help of Sharyn and Ismail, we cleaned all the inside of the piston, as one of the 'lid' was to lose, so acid was not dispensed in the tube but outside, around the piston.

Bubbles were cleared by dispensing HCl in a beaker and using a tube to whisk the bubble away, instead of removing the upper part of the titrino.

• $H_3PO_4$ had to be changed. the plastic of the lid was flittering away, probably due to the fume of the acid.

there was plastic pieces floating in the $H_3PO_4$ solution

→ ceavo making less 'noise' than usual, during TA titration

| SAMPLE | EMF | TA | DIC | Notes |
|---|---|---|---|---|
| 80289C-40993 | 168.1 | 2247.21 | 2006.98 | |
| 80289-41012 | 244.1 | 1961.05 | 2104.69 | TA? |
| 80289-41021 | 158.1 | 2223.44 | 1903.93 | Alk not great |
| 80289-41247 | 184.0 | 2220.60 | 2111.17 | Servo too weak but no leak LD |
| NUTS LAB 06 | 167.4 | 2274.72 | 2029.78 | |
| CRM-195-0327-01 | 168.6 | 2137.17 | 1923.96 | |

LD

16/11/2022

Acid batch: 11/11/22
Rinsing solution: 11/11/22
Nuts water: 15/11/22
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1) -> ⚠ all same except anode electrode -> big one as other one used
T: 99.9-100.2%
Method: 3C standard
Kill + start call

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 171.8 | 2288.45 | 1697.43 | ⚠ DIC pipette not filled bc sample line twisted |
| JUNK02 | 171.8 | 2301.13 | 2136.19 | |
| JUNK03 | 216.4 | 2143.20 | 2136.10 | ⚠ all did not rinse -> changed rinsing tube going through pump |
| JUNK04 | 171.6 | 2301.98 | 2136.48 | |
| CRM-195-0134-01 | 167.9 | 2138.42 | 1937.15 | |
| NUTSLAB01 | 337.1 | 224.69 | 2042.49 | ⚠ last rinse did not empty -> changed sump |
| NUTSLAB02 | 167.4 | 2284.00 | 2043.10 | |
| S0289-40459 | 183.6 | 2311.23 | 2195.30 | |
| S0289-40540 | 167.2 | 2221.64 | 1990.99 | |
| 64PES03-8-5-2-D | 172.8 | 2244.67 | 2062.37 | |
| 64PES03-13-6-5 | 172.9 | 2243.49 | 2058.29 | |
| S0289-41093 | 161.9 | 2261.55 | 1979.75 | A/K curve very bad |
| NUTSLAB03 | 167.3 | 2284.33 | 2041.05 | |
| S0289-41260 | 191.5 | 2281.57 | 2205.23 | |
| S0289-40991 | 176.9 | 2209.26 | 2049.29 | |
| S0289-40315 | 180.8 | 2198.30 | 2067.57 | |
| 64PES03-173-2 | 169.6 | 2042.31 | 2025.65 | ⚠ TA not empty -> increased TA pipette pressure |
| 64PES03-173-5 | 169.5 | 2244.06 | 2025.77 | |
| NUTSLAB04 | 167.6 | 2283.46 | 2038.73 | |
| S0289-40994 | 163.3 | 2260.88 | 1986.89 | A/K curve not great |
| S0289-41015 | 172.4 | 2228.58 | 2029.19 | |
| S0289-41001 | 182.0 | 2289.09 | 2158.81 | |
| S0289-40987 | 184.1 | 2266.49 | 2149.51 | |
| S0289-40471 | 165.2 | 2210.35 | 1967.50 | |
| NUTSLAB05 | 167.5 | 2284.65 | 2035.75 | |
| S0289-40435 | 178.2 | 2203.10 | 2051.44 | |
| S0289-41040 | 161.5 | 2261.27 | 1969.99 | A/K curve not great |
| S0289-41006 | 184.2 | 2327.61 | 2206.95 | |

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| S0289-40454 | 183.1 | 2313.87 | 2186.64 | |
| 64PES03-57-3-11 | 166.4 | 2231.21 | 1993.17 | 500 mL |
| NUTSLAB06 | 167.4 | 2285.28 | 2037.50 | |
| CRM-195-0286-01 | 167.9 | 2139.66 | 1923.23 | |

LD 17/11/2022

Acid batch: 11/11/22
Rinsing solution: 16/11/22
Nuts water: 15/11/22
Electrode stable, filled I/O solutions
Cleared acid lines
Allocated coulometer port (#1) -> same as all 16/11/22
T: 99.8-100%
Method: 3C standard
Kill + start all

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 172.6 | 2307.98 | 2155.37 | |
| JUNK02 | 172.7 | 2307.56 | 2152.10 | |
| JUNK03 | 172.8 | 2308.07 | 2152.58 | |
| CRM-198-0551-01 | 170.00 | 2127.15 | 1945.16 | |
| NUTSLAB01 | 166.7 | 2284.26 | 2043.45 | |
| S0289-40136 | 189.8 | 2208.29 | 2138.09 | |
| S0289-41173 | 170.6 | 2233.24 | 2035.10 | |
| S0289-41085 | 178.6 | 2214.47 | 2069.90 | |
| S0289-40200 | 195.4 | 2204.90 | 2162.21 | |
| S0289-40155 | 183.8 | 2206.31 | 2097.91 | |
| NUTSLAB02 | 166.95 | 2284.41 | 2038.61 | |
| S0289-41214 | 160.7 | 2261.88 | 1965.88 | TA curve not great |
| S0289-40184 | 188.9 | 2265.15 | 2183.12 | |
| 64PES03-50-4-2 | 174.4 | 2239.09 | 2066.80 | duplicate warning |
| S0289-40190 | 183.5 | 2208.14 | 2095.22 | |
| S0289-40194 | 191.2 | 2203.31 | 2135.79 | |
| ~~S0289-40836~~ | | | | |
| NUTSLAB03 | 167.0 | 2284.19 | 2037.08 | ⚠ Accidentally |
| 64PES03-49-1-8 | 165.5 | 2230.36 | 1991.57 | |
| S0289-40836-S | 159.4 | 2258.25 | 1951.64 | '-S' bc of above |
| S0289-40895 | 183.9 | 2295.29 | 2176.96 | ⚠ elec. tape off |
| S0289-41259 | 183.4 | 2307.32 | 2185.62 | |
| 64PES03-184-5 | 169.2 | 2239.76 | 2026.81 | |
| NUTSLAB04 | 166.9 | 2284.75 | 2036.06 | |
| S0289-41174 | 172.6 | 2220.08 | 2027.42 | |
| S0289-40185 | 187.2 | 2233.84 | 2134.73 | |
| S0289-41211 | 165.8 | 2275.25 | 2018.16 | |

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| 64PES03 27-5-11 | 168.3 | 2237.79 | 2017.41 | Dup. warning |
| S0289-40453 | 161.3 | 2250.14 | 1963.95 | ⚠ TA curve not great |
| NUTSLAB05 | 166.9 | 2283.71 | 2033.53 | |
| CRM-198-0119-01 | 170.4 | 2127.08 | 1933.70 | |

named "S0289-40836" but should be "NUTSLAB03"

18/11/22

LD, YO

Acid batch: 11/11/22
Rinsing solution: 11/11/22
Nuts water: 15/11/22
Electrode stable ~~stable~~, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1) + same cell as 16/11
T: 99.8- 100.2%
Method: 3C standard
Kill + start cell

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 170.7 | 2306.22 | 2147.66 | |
| JUNK02 | 170.7 | 2307.26 | 2142.67 | |
| JUNK03 | 170.7 | 2307.13 | 2139.64 | |
| JUNK04 | 170.79 | 2307.34 | 2140.56 | |
| CRM-195-0406-01 | 166.8 | 2139.05 | 1933.99 | |
| NUTSLAB9 | 166.2 | 2284.13 | 2042.36 | |
| S0289-40863 | 175.4 | 2204.76 | 2048.59 | |
| S0289-41310 | 155.9 | 2256.30 | 1926.11 | AK curve bad |
| 64PES03-21-3-8 | 166.8 | 2231.70 | 2009.51 | |
| S0289-40851 | 174.8 | 2204.06 | 2043.33 | |
| S0289-40842 | 183.2 | 2313.86 | 2198.48 | |
| NUTSLAB02 | 166.4 | 2284.46 | 2037.01 | |
| S0289-40823 | 183.6 | 2260.08 | 2145.26 | |
| 64PES03-23-3-8 | 167.9 | 2238.06 | 2019.88 | |
| S0289-41169 | 183.6 | 2181.84 | 2076.20 | |
| S0289-41192 | 157.9 | 2209.12 | 1899.42 | TA curve |
| S0289-40847 | 183.6 | 2256.77 | 2141.29 | |
| NUTSLAB03 | 166.6 | 2284.08 | 2036.56 | |
| 64PES03-16-4-8 | 168.9 | 2238.44 | 2025.07 | |
| S0289-40086 | 189.1 | 2239.26 | 2156.89 | |
| S0289-41172 | 171.6 | 2229.84 | 2034.18 | |
| 64PES03-61-6-8 | 174.9 | 2240.60 | 2073.28 | Elec. toupe off |
| S0289-40764 | 158.1 | 2255.34 | 1940.80 | TA curve not great |
| NUTSLAB04 | 166.6 | 2284.43 | 2036.10 | |
| S0289-41295 | 185.8 | 2303.60 | 2198.51 | |

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| S0289-40070 | 161.1 | 2212.55 | 1936.58 | |
| 64PES03-10-5-11 | 166.1 | 2220.79 | 1991.15 | |
| S0289-40410 | 183.4 | 2312.89 | 2190.89 | |
| S0289-41167 | 162.4 | 2266.44 | 1983.90 | AK curve not great |
| S0289-41095 | 155.4 | 2227.32 | 1892.97 | " " " |
| S0289-41150 | 182.1 | 2284.32 | 2156.60 | |
| NUTSLAB05 | 166.5 | 2284.09 | 2032.47 | |
| CRM-195-0421-01 | 167.4 | 2138.31 | 1925.13 | |

LD 19/11/22

Acid batch: 11/11/22
Rinsing solution: 11/11/22
Nuts Water: 15/11/22
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1) + same cell as 16/11
T: 99.9- 100.0%
Method: 3C standard
Kill+ start cell

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 168.9 | 2305.36 | 2136.86 | |
| JUNK02 | 168.8 | 2306.50 | 2131.81 | |
| JUNK03 | 168.9 | 2306.92 | 2131.24 | |
| CRM-198-1041-01 | 169.4 | 2125.01 | 1942.55 | |
| NUTSLAB01 | 165.6 | 2281.68 | 2039.50 | |
| S0289-41297 | 183.3 | 2315.06 | 2206.03 | |
| S0289-41146 | 182.1 | 2284.59 | 2168.97 | |
| S0289-40098 | 190.9 | 2201.92 | 2141.05 | |
| 64PES03-34-4-11 | 168.2 | 2235.06 | 2025.88 | |
| S0289-41226 | 166.8 | 2247.96 | 2018.22 | |
| NUTSLAB02 | 166.0 | 2282.22 | 2037.25 | |
| S0289-40231 | 187.9 | 2189.60 | 2110.31 | |
| 64PES03-34-4-5-D | 173.3 | 2236.72 | 2064.00 | |
| S0289-41276 | 183.1 | 2302.13 | 2182.12 | |
| S0289-40290 | 182.4 | 2317.42 | 2196.11 | |
| S0289-41225 | 166.8 | 2245.60 | 2015.98 | |
| NUTSLAB03 | 166.2 | 2280.57 | 2034.98 | |
| S0289-41152 | 183.4 | 2277.19 | 2162.55 | |
| S0289-40924 | 162.4 | 2240.52 | 1972.42 | TA anue |
| S0289-41074 | 181.6 | 2283.98 | 2158.32 | |
| S0289-41091 | 163.0 | 2262.17 | 1990.95 | |
| 64PES03-16-4-5 | 168.2 | 2236.84 | 2023.30 | |
| S0289-40910 | 183.9 | 2313.77 | 2199.78 | |
| NUTSLAB04 | 166.2 | 2281.67 | 2034.48 | |
| S0289-41271 | 184.4 | 2315.19 | 2203.28 | |
| 64PES03-13-6-11 | 167.8 | 2232.84 | 2015.43 | |

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| S0289-41253 | 182.9 | 2311.12 | 2190.88 | |
| S0289-40756 | 175.6 | 2195.43 | 2038.13 | elec. tape off |
| S0289-41155 | 185.6 | 2313.66 | 2209.20 | |
| S0289-41221 | 179.3 | 2218.71 | 2079.44 | |
| NUTSLAB05 | 166.1 | 2281.11 | 2031.72 | |
| CRM-198-0862-01 | 169.8 | 2123.80 | 1933.89 | |

LD 20/11/22

Acid batch: 19/11/22
Rinsing solution: 19/11/22.
Nuts water: 15/11/22
Electrode stable, filled I/O solutions
Cleared acid lines (rinsed x3 for new HCl)
Allocated coulometer port (#1) + same all as 15/11
T: 99.9-100.0 %
Method: 3C standard
Kill + start cell

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 167.3 | 2368.71 | 2126.25 | |
| JUNK02 | 167.1 | 2371.84 | 2122.70 | |
| JUNK03 | 167.1 | 2373.22 | 2121.28 | |
| JUNK04 | 167.0 | 2371.07 | 2119.31 | |
| JUNK05 | 167.2 | 2372.77 | 2119.31 | |
| CRM-198-0366-01 | 168.9 | 2188.77 | 1943.41 | |
| NUTSLAB01 | 165.5 | 2349.26 | 2039.09 | |
| S0289-41232 | 160.0 | 2331.01 | 1981.24 | Alk. curve |
| S0289-40740 | 157.6 | 2316.53 | 1945.33 | Alk. curve |
| S0289-41274 | 182.4 | 2385.21 | 2193.62 | |
| S0289-41073 | 184.1 | 2340.16 | 2168.28 | |
| S0289-41061 | 183.4 | 2399.46 | 2218.54 | |
| 64PES03-26-5-11 | 167.1 | 2300.18 | 2018.30 | |
| NUTSLAB02 | 165.7 | 2349.39 | 2035.20 | |
| S0289-40751 | 183.2 | 2320.16 | 2142.53 | |
| S0289-40253 | 184.2 | 2249.17 | 2083.56 | |
| 64PES03-34-8 | 168.0 | 2302.73 | 2023.45 | elastic band |
| S0289-41166 | 164.9 | 2323.12 | 2009.03 | Alk. curve |
| S0289-40928 | 159.1 | 2299.78 | 1940.46 | Alk. curve |
| NUTSLAB03 | 165.8 | 2349.57 | 2032.50 | |
| S0289-40727 | 183.6 | 2319.08 | 2145.00 | |
| S0289-41275 | 182.8 | 2381.77 | 2186.59 | |
| S0289-40922 | 163.8 | 2300.64 | 1982.84 | Alk. curve |
| S0289-41022 | 154.5 | 2289.18 | 1887.18 | Alk. curve |
| 64PES03-1-1-8 | 165.2 | 2300.71 | 2001.38 | |
| NUTSLAB04 | 165.7 | 2350.54 | 2032.27 | |

| SAMPLE | EMF 1st /mV | TA | DIC | NOTES |
|---|---|---|---|---|
| S0289-41265 | 184.1 | 2364.67 | 2206.04 | |
| S0289-40915 | 182.9 | 2317.81 | 2134.63 | |
| S0289-40339 | 182.2 | 2376.28 | 2187.23 | |
| 64PES03-37-6-11 | 167.2 | 2299.38 | 2013.92 | |
| 64PES03-32-3-2 | 168.6 | 2303.84 | 2026.92 | Duplicate water |
| NUTSLAB05 (19/11) → | 165.6 | 2349.19 | 2031.46 | Duplicate KJ |
| CRM-198-0807-01 | 169.4 | 2185.78 | 1934.86 | → 19/11 instead of 20/11 |

LD 21/11/22

Acid batch: 19/11/22
Rinsing solution: 19/11/22
Nuts water: 20/11/22
Electrode stable, filled I/O solutions
Cleaned acid lines
Allocated coulometer port (#1) -> same cell as 16/11
T: 99.9 - 100.1 %
Method: 3C standard
Kill + start cell

| SAMPLE | EMF 1st/mV | TA | DIC | NOTES |
|---|---|---|---|---|
| JUNK01 | 170.4 | 2379.32 | 2156.96 | |
| JUNK02 | 170.4 | 2379.89 | 2152.29 | |
| JUNK03 | 170.4 | 2378.17 | 2150.17 | |
| CRM-198-0675-01 | 169.0 | 2188.33 | 1944.76 | |
| NUTSLAB01 | 166.2 | 2349.69 | 2043.31 | |
| S0289-40868 | 168.00 | 2287.52 | 2014.46 | |
| S0289-41070 | 182.9 | 2341.73 | 2165.35 | |
| S0289-41270 | 184.4 | 2385.75 | 2214.54 | |
| 64PES03-52-6-11 | 166.4 | 2490.17 | 2014.43 | 500 mL ⚠ TA pipette not full |
| S0289-40770 | 175.4 | 2268.73 | 2051.86 | |
| S0289-4930 | 181.4 | 2363.13 | 2173.16 | |
| NUTSLAB02 | 166.4 | 2351.10 | 2043.16 | |
| 64PES03-50-4-11 | 165.2 | 2296.37 | 1998.83 | 500 mL |
| S0289-40746 | 182.4 | 2378.90 | 2190.52 | |
| S0289-40736 | 160.8 | 2301.46 | 1959.88 | |
| S0289-41090 | 166.6 | 2311.30 | 2013.71 | |
| 64PES03-50-4-5 | 173.3 | 2304.41 | 2066.28 | 500 mL |
| NUTSLAB03 | 166.6 | 2350.78 | 2041.3 | |
| S0289-40785 | 160.4 | 2317.79 | 1964.80 | TA curve |
| S0289-40818 | 182.6 | 2379.58 | 2192.82 | |
| 64PES03-53-4-12 | 166.7 | 2299.55 | 2009.40 | 500 mL |
| S0289-40804 | 186.4 | 2360.19 | 2196.93 | |
| S0289-40344 | 186.6 | 2340.68 | 2179.43 | |
| NUTSLAB04 | 166.5 | 2349.78 | 2036.73 | |
| 64PES03-69-4-5 | 166.4 | 2322.86 | 2028.22 | 500 mL |

| SAMPLE | EMF 1st/mV | TA | DIC | NOTES |
|---|---|---|---|---|
| S0289-40732 | 178.3 | 2269.85 | 2059.61 | |
| S0289-40765 | 180.4 | 2286.49 | 2089.47 | elec. tape off |
| S0289-40876 | 159.4 | 2310.33 | 1945.47 | TA curve |
| S0289-41023 | 154.2 | 2281.82 | 1877.35 | TA curve |
| NUTSLAB05 | 166.4 | 2351.99 | 2036.37 | |
| CRM-198-1232-01 | 169.4 | | | |

LD TA ONLY 22/11/22

Acid batch: 19/11/22 Nuts water: 20/11/22
Rinsing solution: 19/11/22
Electrode stable, filled I/O solutions

Testing TA only

| SAMPLE | EMF 1st /mV | TA | | NOTES |
|---|---|---|---|---|
| JUNK01 | | 241.241 | | working on mixing |
| JUNK02 | | 2381.57 | | " " |
| JUNK03 | 169.4 | 2380.77 | | " " |
| | Control | titrino | | |
| JUNK04 | 169.4 | 2379.28 | | |
| JUNK05 | 169.6 | 2380.35 | | |
| JUNK06 | 169.6 | 2380.04 | | |
| CRM-198-0675-02 | 167.4 | 2189.43 | | |
| NUTSLAB01 | 166.2 | 2351.00 | | |
| ST23 | 168.2 | 2265.04 | | |
| ST22 | 167.9 | 2266.61 | | |
| ST44 | 166.4 | 2272.65 | | |
| ST37 | 166.9 | 2265.89 | | |
| S0289-41142 | 157.5 | 2285.95 | | |
| S0289-41169 | 162.4 | 2278.84 | | |
| S0289-03042022-21-00 | 156.9 | 2299.81 | 03/04/2022 | 21:00 UTC |
| S0289-40388 | 165.4 | 2369.00 | | |
| S0289-41180 | 160.6 | 2327.32 | | |
| S0289-25032022-05-25 | 157.4 | 2273.82 | 25/03/2022 | 05:25 UTC |
| NUTSLAB02 | 166.4 | 2351.95 | | |
| S0289-18032022-07-45 | 159.4 | 2304.02 | 18/03/2022 | 07:45 UTC |
| S0289-41205 | 164.8 | 2291.24 | | |
| S0289-02032022-02-09 | 159.8 | 2288.40 | 2/3/2022 | 02:09 |
| S0289-23032022-23-50 | 157.9 | 2294.54 | 23/03/2022 | 23:50 UTC |
| S0289-41160 | 163.4 | 2344.97 | | |
| S0289-41199 | 164.5 | 2367.91 | | |
| S0289-01042022-23-00 | 157.4 | 2283.80 | 01/04/2022 | 23:00 UTC |
| S0289-41288 | 157.9 | 2292.90 | | |
| S0289-41217 | 164.8 | 2297.16 | | |
| S0289-28022022-16-20 | 160.3 | 2275.20 | 28/02/2022 | 16:20 |
| NUTSLAB03 | 166.1 | 2351.57 | | |
| CRM-198-1232-02 | 167.4 | 2186.75 | | |

LD TA ONLY 23/11/22

Acid batch: 19/11/22
Rinsing solution: 19/11/22
Nuts water: 20/11/22
Electrode stable, filled I/O solutions + cleaned acid lines
Method: 3C standard AT only

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| JUNK01 | 167.8 | 2378.24 | |
| JUNK02 | 167.9 | 2380.23 | |
| JUNK03 | 168.0 | 2380.63 | |
| CRM-198-0366-02 | 2190.47 → | 166.8 | |
| NUTSLAB01 | 165.9 | 2351.07 | |
| S0289-01032022-17-20 | 160.0 | 2289.90 | 01/03/2022 17:20 UTC |
| S0289-17032022-19-30 | 159.0 | 2299.79 | 17/03/2022 19:30 UTC |
| S0289-41282 | 159.7 | 2301.19 | |
| S0289-40977 | 159.1 | 2355.22 | |
| S0289-01042022-13-30 | 157.2 | 2281.75 | 01/04/2022 13:30 UTC |
| S0289-01032022-00-58 | 160.2 | 2272.42 | 1/3/22 00:58 |
| S0289-41280 | 161.6 | 2276.62 | |
| S0289-24032022-00-00 | 158.1 | 2289.21 | 24/03/2022 00:00 UTC |
| S0289-41266 | 163.3 | 2390.91 | |
| S0289-41240 | 157.4 | 2282.42 | |
| NUTSLAB02 | 166.1 | 2350.92 | |
| S0289-41011 | 165.1 | 2326.54 | |
| S0289-41216 | 157.4 | 2311.61 | |
| S0289-41022 | 157.0 | 2285.03 | |
| S0289-41159 | 161.4 | 1616.86 | DIDN'T FILL FULLY |
| S0289-30359 | 160.7 | 2379.28 | |
| S0289-41146 | 160.6 | 2352.84 | |
| S0289-40382 | 164.9 | 2381.23 | |
| S0289-41157 | 159.00 | 2381.29 | |
| S0289-03032022-13-00 | 160.05 | 2289.48 | 03/03/2022 13:00 UTC |
| S0289-41119 | 164.0 | 2269.57 | |
| NUTSLAB03 | 165.9 | 2351.08 | |
| S0289-04032022-07-00 | 159.8 | 2305.49 | 04/03/2022 07:00 UTC |
| S0289-29032022-13-20 | 157.4 | 2284.81 | 29/03/2022 13:20 UTC |
| S0289-41010 | 164.7 | 2345.10 | |
| S0289-05032022-17-05 | 159.4 | 2310.61 | 05/03/2022 17:05 UTC |
| S0289-03042022-19-00 | 156.2 | 2297.73 | 03/04/2022 19:00 UTC |

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| S0289- 41081 | 164.45 | 2371.62 | |
| S0289- 41176 | 160.9 | 2316.27 | |
| S0289-26032022-23-01 | 157.5 | 2283.65 | 26/03/22 23:01 UTC |
| S0289-41099 | 164.0 | 2354.52 | |
| S0289-41000 | 157.2 | 2279.52 | |
| NUTSLAB04 | 165.5 | 2352.27 | |
| S0289-41009 | 164.1 | 2367.39 | |
| S0289-41001 | 163.4 | 2352.75 | |
| S0289-41168 | 156.4 | 2290.07 | |
| S0289-41117 | 163.4 | 2367.03 | |
| S0289-30032022-05-40 | 156.3 | 2288.41 | 30/03/2022 05:40 UTC |
| S0289-31032022-NA-NA | 156.6 | 2278.88 | 31/03/2022 UTC (no time) |
| S0289-28032022-12-00 | 156.2 | 2269.67 | 28/03/2022 12:00 UTC |
| S0289-26032022-07-08 | 156.1 | 2275.38 | 26/03/2022 7:08 UTC |
| S0289-40988 | 160.1 | 2288.15 | |
| S0289-31032022-21-30 | 157.2 | 2311.72 | 31/03/2022 21:30 UTC |
| NUTSLAB05 | 165.1 | 2349.23 | |
| S0289-02032022-12-00 | 159.1 | 2289.81 | 02/03/2022 12:00 UTC |
| S0289-25032022-20-30 | 156.1 | 2284.14 | 25/03/2022 20:30 UTC |
| S0289-03042022-21-00 → | 157.9 → dilute reading | 2284.76 | 03/04/2022 21:00 UTC |
| S0289-28032022-21-45 | 156.8 | 2276.66 | 28/03/2022 21:45 UTC |
| S0289- 41204 | 163.8 | 2340.84 | |
| S0289-41083 | 163.7 | 2329.21 | |
| S0289-04032022-02-16 | 159.2 | 2291.15 | 04/03/2022 02:16 UTC |
| S0289-03032022-02-54 | 159.5 | 2298.12 | 03/03/22 2:54 UTC |
| S0289-41031 | 161.8 | 2279.73 | |
| S0289-41008 | 162.8 | 2377.51 | |
| NUTSLAB06 | 164.8 | 2350.61 | |
| CRM-198-0307-02 | 165.9 | 2187.25 | |

LD TA ONLY

Acid batch: 24/11/22

Rinsing solution: 23/11/22

Nuts water: 20/11/22

Electrode stable, filled I/O solutions

Method: 3C standard AT only

24/11/22

⚠ TA not filling for some samples because hole in sampling tube

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| JUNK01 | / | / | FORGOT CAS |
| JUNK02 | 165.5 | 2381.59 | |
| JUNK03 | 165.9 | 2382.54 | |
| CRM-198-0862-02 | 166.4 | 2187.57 | |
| NUTSLAB01 | 165.1 | 2349.95 | |
| S0289-06032022-05-52 | 159.3 | 2305.34 | 06/03/22 05:52 UTC |
| S0289-41032 | 161.3 | 2298.66 | |
| S0289-41281 | 162.6 | 2270.87 | |
| S0289-04032022-15-35 | 159.4 | 2013.23 | 04/03/22 15:35 UTC |
| ↳ Pipette not full | | | |
| S0289- 41178 | 159.4 | 2319.98 | |
| S0289- 41239 | 158.4 | 2283.82 | |
| S0289- 41244 | 164.2 | 2391.93 | |
| S0289-41080 | 158.6 | 2379.32 | |
| S0289-40372 | 160.4 | 2258.55 | |
| S0289-41192 | 168.1 | 2303.28 | TA PIPETTE NOT FULL |
| S0289-02032022-01-10 | 159.7 | 2283.66 | 02/03/2022 01:10 UTC |
| S0289-41073 | 164.4 | 1925.41 | TA PIPETTE NOT FULL |
| NUTSLAB02 | 165.5 | 2360.58 | |
| S0289- 40377 | 159.9 | 2148.00 | TA PIPETTE NOT FULL |
| S0289-41116 | 163.9 | 2384.27 | |
| S0289-02042022-20-50 | 156.8 | 1919.00 | 02/04/2022 20:50 UTC |
| ↳ pipette not full | | | |
| NUTSLAB03 | 165.4 | 2343.70 | Acid line slipped |
| NUTSLAB04 (room temp) | 165.2 | 2351.22 | Added o-ring to cap |
| S0289-41194 | 163.6 | 2372.92 | ~~Air, not enough~~ |
| S0289-41030 | 162.9 | 2077.32 | Not enough sampl |
| S0289-29032022-18-30 | 156.4 | 2285.54 | |
| S0289-41158 | 162.8 | 2372.64 | |
| S0289-41179 | 158.8 | 2323.62 | |
| S0289-41203 | 164.0 | 2353.25 | |
| S0289-41118 | 168.4 | 2288.82 | |

| | | |
|---|---|---|
| SO289-1803202-23-00 | 158.4 | 2295.02 |
| NUTSLAB05 | 165.0 | 2352.06 |
| CRM-198-1041-02 | 166.7 | 2187.39 |

LD TA ONLY 25/11/22

Acid batch: 24/11/22
Rinsing solution: 24/11/22
Nuts water: 20/11/22
Electrode stable, filled I/O solutions
Method: 3C standard HT only

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| NUTSLAB01 | 165.0 | 2349.36 | |
| CRM-195-0421-02 | 165.1 | 2198.06 | |
| NUTSLAB02 | 165.2 | 2350.25 | |
| AE-EXP6-I1 | 157.5 | 2310.82 | EXP.6-I1 |
| AE-HL-E2-I1 | 159.2 | 2273.92 | HL-E2-I1 |
| AE-EXP6-I2 | 157.8 | 2310.53 | EXP6-I2 |
| AE-HL-E2-I2 | 159.4 | 2273.41 | HL-E2-I2 |
| AE-EXP2-NaOH1 | 136.2 | 2737.81 | SO289 TA Exp 2 NaOH1 |
| AE-HL-E2-C1 | 159.4 | 2269.86 | HL-E2-C1 |
| AE-EXP6-I3 | 157.9 | 2311.25 | EXP.6-I3 |
| AE-EXP2-NaOH2 | 136.2 | 2737.45 | SO289 TA Exp 2 NaOH2 |
| AE-HL-E2-I3 | 159.4 | 2277.32 | HL-E2-I3 |
| AE-EXP2 NaOH3 | 137.3 | 2736.61 | SO289 TA Exp 2 NaOH3 |
| NUTSLAB03 | 165.8 | 2352.09 | |
| AE-EXP1-NaOH1 | 135.6 | 2727.89 | SO289 TA Exp. 1 NaOH1 |
| AE-HL-E1-C2 | 160.1 | 2274.15 | HL-E1-C2 |
| AE-HL-E1-C3 | 159.8 | 2272.57 | HL-E1-C3 |
| AE-EXP1-NaOH3 | 136.4 | 2736.42 | SO289 TA Exp. 1 NaOH3 |
| AE-HL-E2-C2 | 159.9 | 2266.31 | HL-E2-C2 |
| AE-HL-E1-I3 | 159.5 | 2305.75 | HL-E1-I3 E1 or E3? |
| AE-HL-E2-C3 | 160.0 | 2271.72 | HL-E2-C3 |
| AE-HL-E1-C1 | 159.6 | 2272.58 | HL-E1-C1 |
| AE-EXP11-NaOH3 | 143.3 | 2421.27 | EXP.11 NaOH3 |
| AE-HL-E3-I2 | 159.3 | 2328.85 | HL-E3-I2 |
| NUTSLAB04 | 165.3 | 2350.94 | |

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| AE-EXP1-NaOH2 | 134.9 | 2735.95 | SO289 TA Exp. 1 NaOH2 |
| AE-EXP11-C3 | 156.9 | 2279.84 | EXP.11 C3 |
| AE-HL-E3-I1 | 159.4 | 2303.53 | HL-E3-I1 |
| AE-EXP11-NaOH2 | 149.9 | 2110.69 | EXP.11 NaOH2 |
| AE-EXP11-C1 | 156.3 | 2276.92 | EXP.11 C1 |
| NUTSLAB05 | 164.8 | 2350.88 | |
| CRM-195-0332-02 | 165.2 | 2193.85 | |

LD TA ONLY 30/11/22

Acid batch: 24/11/22
Rinsing solution 30/11/22
Nuts water: 20/11/22
Electrode stable, filled I/O solutions
Method: 3C standard HT only

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| JUNK01 | 163.9 | 2380.72 | |
| JUNK02 | 164.1 | 2381.18 | |
| CRM-198-0551-02 | 170.1 | 2175.50 | |
| NUTSLAB01 | 166.4 | 2351.02 | |
| AE-EXP11-NaOH1 | 145.1 | 2334.56 | EXP.11 NaOH1 |
| AE-EXP4-C2 | 161.1 | 2288.44 | EXP.4 C2 |
| AE-EXP4-NaOH3 | 137.8 | 2764.16 | SO289 TA Exp. 4 NaOH3 |
| AE-EXP4-NaOH2 | 145.7 | 2773.24 | Exp. 4 NaOH2 |
| AE-EXP4-C1 | 161.1 | 2286.75 | EXP.4 C1 |
| AE-EXP4-C3 | 161.6 | 2295.30 | EXP.4 C3 |
| AE-EXP4-NaOH1 | 138.3 | 2771.99 | SO289 TA Exp. 4 NaOH1 |
| AE-EXP11-C2 | 159.1 | 2279.75 | EXP.11 C2 |
| AE-EXP9-C2 | 158.9 | 2286.57 | EXP9 C2 |
| AE-EXP9-NaOH2 | 142.1 | 2492.36 | SO289 TA Exp. 9 NaOH2 |
| NUTSLAB02 | 166.9 | 2350.37 | |
| AE-EXP9-NaOH1 | 138.9 | 2622.41 | SO289 TA Exp. 9 NaOH1 |
| AE-EXP9-NaOH3 | 157.6 | 1987.62 | SO289 TA Exp. 9 NaOH3 |
| AE-EXP9-C3 | 159.3 | 2283.56 | EXP.9 C3 |
| AE-EXP7-NaOH2 | 140.6 | 2681.13 | SO289 TA Exp. 7 NaOH2 |
| AE-EXP7-NaOH3 | 143.2 | 2534.29 | SO289 TA Exp. 7 NaOH3 |
| AE-EXP7-C1 | 160.6 | 2312.61 | EXP.7 C1 |
| AE-EXP7-NaOH1 | 147.9 | 2742.54 | SO289 TA Exp. 7 NaOH1 |

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| AE-EXP9-C1 | 159.4 | 2281.08 | EXP.9 C1 |
| AE-EXP7-C2 | 160.4 | 2312.00 | EXP.7 C2 |
| AE-EXP6-C3 | 160.0 | 2297.00 | EXP.6 C3 |
| NUTSLAB03 | 166.8 | 2350.67 | SO289 TA Exp. 5 NaOH1 |
| AE-EXP6-NaOH1 | 138.8 | 2701.01 | |
| AE-EXP7-C3 | 160.4 | 2313.59 | EXP.7 C3 SO289 TA HL-E4-I3 |
| AE-HL-E4-I3 | 160.8 | 2302.11 | SO289 TA HL-E4-I1 |
| AE-HL-E4-I1 | 160.9 | 2304.51 | SO289 TA EXP.6-C1 |
| AE-EXP6-C1 | 160.0 | 2307.36 | |
| AE-EXP6-NaOH2 | 139.9 | 2621.96 | SO289 TA Exp. 6 NaOH2 |
| AE-EXP6-NaOH3 | 139.1 | 2635.06 | SO289 TA Exp. 6 NaOH3 |
| AE-EXP6-C2 | 159.6 | 2292.24 | EXP.6-C2 |
| AE-HL-E1-I2 | 160.9 | 2274.18 | HL-E1-I2 |
| AE-HL-E1-I1 | 160.9 | 2271.50 | HL-E1-I1 |
| NUTSLAB04 | 166.2 | 2350.16 | |
| CRM-198-0119-02 | 168.8 | 2183.38 | |

↳ TA ONLY 01/12/22

Acid batch: 24/11/22
Rinsing solution: 30/11/22
Nuts water: 20/11/22
Electrode stable, filled I/O solutions
Method: 3C standard AT only

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| NUTSLAB01 | 164.4 | 2347.93 | |
| NUTSLAB02 | 164.5 | 2349.77 | |
| CRM-198-0060-02 | 168.8 | 2175.62 | |
| NUTSLAB03 | 164.8 | 2348.37 | |
| AE-HL-E1-I3-M | 159.4 | 2280.37 | HL-E1-I3 → mistake see 25/11 |
| AE-EXP5-NaOH1 | 139.1 | 2682.67 | SO289 TA Exp. 5 NaOH1 |
| AE-EXP5-NaOH3 | 137.8 | 2711.42 | SO289 TA Exp. 5 NaOH3 |
| AE-EXP5-NaOH2 | 139.5 | 2634.20 | SO289 TA Exp. 5 NaOH2 |
| AE-EXP12-C3 | 158.6 | 2276.99 | EXP.12 C3 |
| AE-EXP8-I | 159.1 | 2296.53 | EXP.8 I |
| AE-EXP12-NaOH2 | 154.9 | 1976.37 | EXP.12 NaOH2 |
| AE-EXP12-NaOH1 | 152.5 | 2065.36 | EXP.12 NaOH1 |
| AE-EXP12-NaOH3 | 144.8 | 2278.24 | EXP.12 NaOH3 |
| AE-EXP12-C1 | 157.1 | 2273.86 | EXP.12 C1 |

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| NUTSLAB04 | 165.3 | 2350.80 | |
| AE-EXP12-C2 | 157.2 | 2273.20 | EXP.12 C2 |
| AE-EXP9-I1 | 157.1 | 2293.61 | EXP.9 I1 |
| AE-EXP9-I2 | 157.4 | 2293.81 | EXP.9 I2 |
| AE-EXP7-I2 | 158.9 | 2315.35 | EXP.7-I2 |
| AE-EXP7-I1 | 158.8 | 2317.00 | TA EXP.7-I1 |
| AE-EXP9-I3 | 157.0 | 2294.03 | EXP.9 I3 |
| AE-EXP7-I3 | 158.7 | 2315.28 | EXP.7-I3 |
| AE-EXP12-I3 | 156.8 | 2277.56 | EXP.12 I3 |
| AE-EXP12-I1 | 156.7 | 2279.18 | EXP.12 I1 |
| AE-EXP5-I1 | 158.6 | 2327.07 | EXP.5 I1 |
| NUTSLAB05 | 165.1 | 2352.45 | |
| AE-EXP5-I2 | 158.5 | 2325.08 | EXP.5 I2 |
| AE-EXP5-I3 | 158.3 | 2324.29 | EXP.5 I3 |
| AE-EXP10-I3 | 156.9 | 2287.11 | EXP.10 I3 |
| AE-EXP10-I1 | 156.8 | 2287.04 | EXP.10 I1 |
| AE-EXP10-I2 | 156.7 | 2285.97 | EXP.10 I2 |
| AE-EXP8-C2 | 158.5 | 2283.70 | EXP.8 C2 |
| NUTSLAB06 | 164.7 | 2351.16 | |
| CRM-198-0616-02 | 167.7 | 2182.47 | |

↳ TA ONLY 02/12/22

Acid batch: 24/11/22
Rinsing solution: 30/11/22
Nutswater: 20/11/22
Electrode stable, filled I/O solutions
Method: 3C standard AT only

| SAMPLE | EMF 1st /mV | TA | NOTES |
|---|---|---|---|
| NUTSLAB01 | 164.4 | 2348.33 | |
| NUTSLAB02 | 164.2 | 2352.70 | |
| NUTS LAB03 | 164.5 | 2350.96 | |
| CRM-195-0327-02 | 165.9 | 2188.19 | |
| NUTSLAB04 | 164.8 | 2349.56 | |
| AE-EXP12-I2 | 156.7 | 2277.62 | EXP.12 I2 |
| AE-EXP8-C1 | 158.8 | 2279.91 | EXP.8 C1 |
| AE-EXP8-NaOH3 | 136.4 | 2710.95 | SO289 TA Exp. 8 NaOH3 |
| AE-EXP8-NaOH2 | 137.7 | 2710.94 | SO289 TA Exp. 8 NaOH2 |
| AE-EXP10-C2 | 158.9 | 2277.98 | EXP.10 C2 |
| AE-EXP10-C1 | 157.6 | 2276.80 | EXP.10 C1 |