

# GUO LAB DODGEN B021/121 WEEKLY SWIPES & SURVEYS

Revised 7/9/2019

| Week #  | 11                                 | Dates:                       | 3/14/2021-3/20/2021                                | Counted On                                    | 3/15/2021 |
|---|------------------------------------|------------------------------|--|---|-----------|
| INSTRUMENT USED: Quantasart (Serial# 073396)  |                                    | CONTROL FACTOR:              |  | 1.40E-06                                      |           |
| CHANNEL ENERGY RANGE (keV)  |                                    | CH A: 4-200                  | CH B: 200-2000                                     | CH C: 4-2000                                  |           |
| COUNTING TIME: 5 Min.   | uCi/swipe = CPM:C * Control Factor |                              | uCi/cm <sup>2</sup> = CPM:C * Control Factor / 100 |   |           |
| Limit of quantification (LOQ)=  |                                    | 8.95E-08 uCi/cm <sup>2</sup> |  | QUANTIFICATION BELOW REG GUIDE 8.23 LIMITS OK |           |
| Swipe #   | LOCATION:<br>ROOM # & AREA/OBJECT  | GROSS CPM CHANNEL C          | uCi/swipe  | uCi/cm <sup>2</sup>                           | NOTE:     |
| 1.  | BACKGROUND 1                       | 27                           | *****  | *****   |           |
| 2.  | BACKGROUND 2                       | 39                           | *****  | *****   |           |
| 3.  | BACKGROUND 3                       | 25                           | *****  | *****   |           |
| 4.  | BACKGROUND 4                       | 33                           | *****  | *****   |           |
| 5.  | BACKGROUND 5                       | 28                           | *****  | *****   |           |
| 6.  | BACKGROUND 6                       | 29                           | *****  | *****   |           |
| 7.  | B021 ELEVATOR ENTRANCE             | 29                           | M  | M   |           |
| 8.  | B021 FENCED GATE                   | 26                           | M  | M   |           |
| 9.  | B021 RAM SAFE                      | 27                           | M  | M   |           |
| 10.   | B021 EAST FLOOR                    | 26                           | M  | M   |           |
| 11.   | B021 NORTH BENCH TOP               | 30                           | M  | M   |           |
| 12.   | B021 WEST LAB FLOOR                | 28                           | M  | M   |           |
| 13.   | B021 WORK PLATFORM                 | 26                           | M  | M   |           |
| 14.   | B021 CALORIMETER                   | 25                           | M  | M   |           |
| 15.   | B021 COMPUTERS                     | 24                           | M  | M   |           |
| 16.   | B021 DSC/TGA                       | 27                           | M  | M   |           |
| 17.   | B021 SOUTH BENCH TOP               | 24                           | M  | M   |           |
| 18.   | 121 DOORWAY                        | 26                           | M  | M   |           |
| 19.   | 121 GLOVE BOX- FLOOR               | 28                           | M  | M   |           |
| 20.   | 121 GLOVE BOX                      | 23                           | M  | M   |           |
| 21.   | 121 WEST BENCH TOP                 | 26                           | M  | M   |           |
| 22.   | 121 CENTER OF LAB                  | 25                           | M  | M   |           |
| 23.   | 122 EAST BENCH TOP                 | 28                           | M  | M   |           |
|   |                                    |                              |  |   |           |
| <sup>36</sup> CI SOURCE 09/14/1971  |                                    | 50143                        | *****  | *****   |           |
|   |                                    | 101.10%                      | CALIBRATION CHECK OK?                              |   | YES       |
| Notes(s): M = below limit of quantification on the LSC. The limit of quantification is checked against lowest allowable contamination limit of 1 x 10 <sup>-6</sup> uCi/cm <sup>2</sup> . |                                    |                              |  |   |           |
| SURVEY PREPARED BY: B. Tanner   |                                    |                              | REVIEWED BY: M. Heine                              |   |           |
| SIGN/DATE: <i>B. Tanner</i> 3/31/21   |                                    |                              | SIGN/DATE: <i>M. Heine</i> 4/1/21                  |   |           |

Assay Definition-

Assay Description:

Assay Type: CPM

Report Name: Report1

Output Data Path: C:\Packard\Tricarb\Results\CSE\Reactor Weekly\20210315\_0745

Raw Results Path: C:\Packard\Tricarb\Results\CSE\Reactor Weekly\20210315\_0745\20210315\_0745.results

Assay File Name: C:\Packard\TriCarb\Assays\Reactor Weekly.lsa

Count Conditions-

Nuclide: Reactor

Quench Indicator: tSIE/AEC

External Std Terminator (sec): 0.5 2s%

Pre-Count Delay (min): 0.00

Quench Set: n/a

Count Time (min): 5.00

Count Mode: Normal

Assay Count Cycles: 1

Repeat Sample Count: 1

#Vials/Sample: 1

Calculate % Reference: Off

Background Subtract: Off

Low CPM Threshold: Off

2 Sigma % Terminator: Off

| Regions | LL    | UL     |
|---------|-------|--------|
| A       | 4.0   | 200.0  |
| B       | 200.0 | 2000.0 |
| C       | 4.0   | 2000.0 |

Count Corrections-

Static Controller: On

Luminescence Correction: Off

Colored Samples: n/a

Heterogeneity Monitor: n/a

Coincidence Time (nsec): 18

Delay Before Burst (nsec): 75

Half Life-

Half Life Correction: Off

| Regions | Half Life | Units | Reference Date | Reference Time |
|---------|-----------|-------|----------------|----------------|
| A       |           |       |                |                |
| B       |           |       |                |                |
| C       |           |       |                |                |

Cycle 1 Results

| P# | DATE      | TIME       | S# | Count | Time | CPMA | CPMB | CPMC | SIS    | MESSAGES |
|----|-----------|------------|----|-------|------|------|------|------|--------|----------|
| 1  | 3/15/2021 | 7:46:42 AM | 1  | 5.00  |      | 22   | 5    | 27   | 215.87 |          |
| 1  | 3/15/2021 | 7:53:05 AM | 2  | 5.00  |      | 34   | 5    | 39   | 186.36 |          |
| 1  | 3/15/2021 | 7:59:30 AM | 3  | 5.00  |      | 21   | 4    | 25   | 217.05 |          |
| 1  | 3/15/2021 | 8:05:45 AM | 4  | 5.00  |      | 27   | 6    | 33   | 284.93 |          |
| 1  | 3/15/2021 | 8:12:06 AM | 5  | 5.00  |      | 22   | 6    | 28   | 344.39 |          |
| 1  | 3/15/2021 | 8:18:31 AM | 6  | 5.00  |      | 24   | 6    | 29   | 266.04 |          |
| 1  | 3/15/2021 | 8:24:56 AM | 7  | 5.00  |      | 25   | 4    | 29   | 213.01 |          |
| 1  | 3/15/2021 | 8:31:20 AM | 8  | 5.00  |      | 23   | 3    | 26   | 263.39 |          |
| 1  | 3/15/2021 | 8:37:41 AM | 9  | 5.00  |      | 21   | 5    | 27   | 270.08 |          |
| 1  | 3/15/2021 | 8:44:04 AM | 10 | 5.00  |      | 20   | 6    | 26   | 325.91 |          |
| 1  | 3/15/2021 | 8:50:17 AM | 11 | 5.00  |      | 26   | 5    | 30   | 194.80 |          |
| 1  | 3/15/2021 | 8:56:36 AM | 12 | 5.00  |      | 21   | 7    | 28   | 289.74 |          |

Protocol# 1 - Reactor Weekly.lsa

User: CSE

|   |           |             |    |      |       |       |       |         |
|---|-----------|-------------|----|------|-------|-------|-------|---------|
| 1 | 3/15/2021 | 9:03:03 AM  | 13 | 5.00 | 23    | 3     | 26    | 162.51  |
| 1 | 3/15/2021 | 9:09:25 AM  | 14 | 5.00 | 21    | 4     | 25    | 267.51  |
| 1 | 3/15/2021 | 9:15:49 AM  | 15 | 5.00 | 22    | 3     | 24    | 188.68  |
| 1 | 3/15/2021 | 9:22:09 AM  | 16 | 5.00 | 23    | 4     | 27    | 315.95  |
| 1 | 3/15/2021 | 9:28:27 AM  | 17 | 5.00 | 19    | 4     | 24    | 184.74  |
| 1 | 3/15/2021 | 9:34:45 AM  | 18 | 5.00 | 20    | 6     | 26    | 380.51  |
| 1 | 3/15/2021 | 9:41:02 AM  | 19 | 5.00 | 24    | 4     | 28    | 181.12  |
| 1 | 3/15/2021 | 9:47:23 AM  | 20 | 5.00 | 18    | 5     | 23    | 328.62  |
| 1 | 3/15/2021 | 9:53:47 AM  | 21 | 5.00 | 21    | 4     | 26    | 271.66  |
| 1 | 3/15/2021 | 10:00:08 AM | 22 | 5.00 | 21    | 4     | 25    | 211.55  |
| 1 | 3/15/2021 | 10:06:26 AM | 23 | 5.00 | 24    | 4     | 28    | 223.06  |
| 1 | 3/15/2021 | 10:12:08 AM | 24 | 5.00 | 14557 | 35587 | 50143 | 1010.54 |



# LABORATORY SURVEY

Radiation Safety Office  
 Washington State University  
 Pullman, WA 99164-1302  
 (509) 335 8916

|  |                    |                              |  |                      |                                  |
|--|--------------------|------------------------------|--|----------------------|----------------------------------|
| Building<br>Dodgen Research Facility   | Room<br>121- GUO   | Lab Class<br>D               | Survey Instrument<br>GM Detector Model 3 | Serial No.<br>58680  | Radiation Detected<br>Gamma      |
| Authorized User<br>Xiaofeng Guo  | Date<br>03/15/2001 | Time<br>0830                 | Swipe Instrument<br>Quantasart           | Serial No.<br>073396 | Radiation Detected<br>Beta/Gamma |
| Reactor Status (Check One)<br><input checked="" type="checkbox"/> ON <input type="checkbox"/> OFF <input type="checkbox"/> |                    | LSC Printout Date<br>3/15/01 |  |                      |                                  |

| Survey #              | Location            | CPM | NOTE SWIPE AND SURVEY LOCATIONS ON MAP   |                     |  |
|-----------------------|---------------------|-----|--|---------------------|--|
| 13                    | Background          | 100 | <p>DODG 121 GUO LAB</p> <p>Fume Hood</p> <p>East Bench Top</p> <p>West Bench Top</p> <p>Glove Box</p> <p>13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23</p> <p>N</p> |                     |  |
| 14                    | 121 Doorway         | 90  |  |                     |  |
| 15                    | 121 Center of lab   | 76  |  |                     |  |
| 16                    | 121 Glove Box       | 200 |  |                     |  |
|                       |                     |     |  |                     |  |
|                       |                     |     |  |                     |  |
|                       |                     |     |  |                     |  |
|                       |                     |     |  |                     |  |
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|                       |                     |     |  |                     |  |
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|                       |                     |     |  |                     |  |
|                       |                     |     |  |                     |  |
|                       |                     |     |  |                     |  |
| Swipe # and Locations |                     |     |  |                     |  |
| 18                    | 121 Doorway         |     | Surveyed By:<br>RB   | Date:<br>03/15/2001 |  |
| 19                    | 121 Glove Box-floor |     | Swiped By:<br>RB   | Date:<br>03/15/2001 |  |
| 20                    | 121 Glove Box       |     | Reviewed By:<br><i>[Signature]</i>   | Date:<br>4/1/01     |  |
| 21                    | West Bench Top      |     |  |                     |  |
| 22                    | 121 Center of lab   |     |  |                     |  |
| 23                    | East Bench Top      |     |  |                     |  |

Circled numbers on map indicate a swipe area of 100 square cm. Numbers not circled indicate a survey location.