



## ENVIRONMENTAL LABORATORY LICENSE

Issued to:

Laboratory Director: **Anthony D. Canter**  
Owner/Representative: **Dr. James Williams Ph.D.**

***Microbac Laboratories, Inc.***  
***AZ0723***

is in compliance with Environmental Laboratory's applicable standards for the State of Arizona and maintains on file a List of Parameters for which the laboratory is certified to perform analysis.

**PERIOD OF LICENSURE FROM: 02/25/2026 TO: 02/25/2027**



A handwritten signature in cursive script that reads "Mary Graham".

Mary Graham, Chief  
Office of Laboratory Licensure & Certification  
Bureau of State Laboratory Services

## Arizona Department Of Health Services

### Office of Laboratory Licensure and Certification

250 N.17th Avenue, Phoenix, Arizona 85007-3246

**SDW**

| Parameter                                                             | EPA Method       | Certified On         |
|-----------------------------------------------------------------------|------------------|----------------------|
| DETERMINATION OF SELECTED<br>PERFLUORINATED ALKYL ACIDS<br>(LC/MS/MS) | EPA 537.1 rv.2.0 | 2/11/2025 2:00:50 PM |

Total Count: 1

**SW**

| Parameter                                     | EPA Method | Certified On          |
|-----------------------------------------------|------------|-----------------------|
| ALUMINIUM                                     | 6010D      | 10/24/2023 2:36:24 PM |
| ANTIMONY                                      | 6010D      | 10/24/2023 2:36:24 PM |
| ARSENIC                                       | 6020B      | 10/24/2023 3:43:35 PM |
| ARSENIC                                       | 6010D      | 10/24/2023 2:36:25 PM |
| BARIUM                                        | 6020B      | 10/24/2023 3:43:36 PM |
| BARIUM                                        | 6010D      | 10/24/2023 2:36:26 PM |
| BERYLLIUM                                     | 6020B      | 10/24/2023 3:43:37 PM |
| BERYLLIUM                                     | 6010D      | 10/24/2023 2:36:26 PM |
| BORON                                         | 6010D      | 10/24/2023 2:36:26 PM |
| BROMIDE                                       | EPA 9056A  | 4/23/2008 12:00:00 AM |
| CADMIUM                                       | 6020B      | 10/24/2023 3:43:37 PM |
| CADMIUM                                       | 6010D      | 10/24/2023 2:36:27 PM |
| CALCIUM                                       | 6010D      | 10/24/2023 2:36:27 PM |
| CHLORIDE                                      | EPA 9056A  | 4/23/2008 12:00:00 AM |
| CHLORIN. HERBS BY GC METHYLATION              | EPA 8151A  | 4/22/2009 12:00:00 AM |
| CHROMIUM, TOTAL                               | 6020B      | 10/24/2023 3:43:38 PM |
| CHROMIUM, TOTAL                               | 6010D      | 10/24/2023 2:36:28 PM |
| CLOSED SYSTEM PURGE AND TRAP<br>EXTRACT. VOCs | EPA 5035A  | 4/23/2008 12:00:00 AM |
| COBALT                                        | 6020B      | 10/24/2023 3:43:38 PM |
| COBALT                                        | 6010D      | 10/24/2023 2:36:28 PM |
| CONTINUOUS LIQUID-LIQUID EXTRACTION           | EPA 3520C  | 4/23/2008 12:00:00 AM |
| COPPER                                        | 6020B      | 10/24/2023 3:43:39 PM |
| COPPER                                        | 6010D      | 10/24/2023 2:36:29 PM |
| CORROSIVITY PH DETERMINATION                  | EPA 9040C  | 4/23/2008 12:00:00 AM |

## SW

| Parameter                                   | EPA Method          | Certified On           |
|---------------------------------------------|---------------------|------------------------|
| CYANIDE                                     | EPA 9010C           | 4/28/2008 12:00:00 AM  |
| CYANIDE                                     | EPA 9014            | 4/28/2008 12:00:00 AM  |
| EDB AND DBCP BY MICROEXTRACTION AND GC      | EPA 8011            | 4/23/2008 12:00:00 AM  |
| FLASH POINT BY PENSKEY MARTEMS CUP          | EPA 1010A           | 4/23/2008 12:00:00 AM  |
| FLORISIL CLEANUP                            | EPA 3620C           | 4/23/2008 12:00:00 AM  |
| FLUORIDE                                    | EPA 9056A           | 4/23/2008 12:00:00 AM  |
| IRON                                        | 6010D               | 10/24/2023 2:46:11 PM  |
| LEAD                                        | 6020B               | 10/24/2023 4:05:11 PM  |
| LEAD                                        | 6010D               | 10/24/2023 2:46:11 PM  |
| LITHIUM                                     | 6010D               | 10/24/2023 2:46:12 PM  |
| MAGNESIUM                                   | 6010D               | 10/24/2023 2:46:12 PM  |
| MANGANESE                                   | 6020B               | 10/24/2023 4:05:12 PM  |
| MANGANESE                                   | 6010D               | 10/24/2023 2:46:13 PM  |
| MERCURY                                     | EPA 7470A           | 2/25/2008 12:00:00 AM  |
| MERCURY                                     | EPA 7471B           | 2/25/2008 12:00:00 AM  |
| MICROWAVE ASSISTED DIGESTIONS               | EPA 3015A           | 2/25/2008 12:00:00 AM  |
| MICROWAVE ASSISTED DIGESTIONS               | EPA 3051A           | 2/25/2008 12:00:00 AM  |
| MICROWAVE ASSISTED DIGESTIONS               | 3546                | 3/8/2017 2:58:55 PM    |
| MOLYBDENUM                                  | 6010D               | 10/24/2023 2:46:13 PM  |
| NICKEL                                      | 6020B               | 10/24/2023 4:05:13 PM  |
| NICKEL                                      | 6010D               | 10/24/2023 2:46:13 PM  |
| NITRATE                                     | EPA 9056A           | 4/23/2008 12:00:00 AM  |
| NITRITE                                     | EPA 9056A           | 4/23/2008 12:00:00 AM  |
| NITROAROMATICS, NITRAMINES & NITRATE ESTERS | EPA 8330B           | 12/16/2008 12:00:00 AM |
| NONHALOGENATED ORGANICS USING GC/FID        | EPA 8015D           | 4/23/2008 12:00:00 AM  |
| OIL AND GREASE AND PETROLEUM HYDROCARBONS   | EPA 1664B           | 4/23/2008 12:00:00 AM  |
| ORGANOCHLORINE PESTICIDES BY GC             | EPA 8081B           | 4/23/2008 12:00:00 AM  |
| PCBS BY GC                                  | EPA 8082A           | 4/23/2008 12:00:00 AM  |
| PERCHLORATE                                 | EPA 6850            | 9/5/2013 12:00:00 AM   |
| PFAS IN SOLIDS BY LC-MS/MS                  | EPA 1633 (Jan 2024) | 2/11/2025 2:00:50 PM   |

**SW**

| Parameter                                    | EPA Method         | Certified On          |
|----------------------------------------------|--------------------|-----------------------|
| PH (HYDROGEN ION)                            | EPA 9045D          | 4/23/2008 12:00:00 AM |
| PHOSPHORUS                                   | 6010D              | 10/24/2023 2:46:14 PM |
| POTASSIUM                                    | 6010D              | 10/24/2023 2:46:14 PM |
| PRESSURIZED FLUID EXTRACTION                 | EPA 3545A          | 4/23/2008 12:00:00 AM |
| PURGE AND TRAP FOR AQUEOUS SAMPLES           | EPA 5030C          | 4/23/2008 12:00:00 AM |
| SELENIUM                                     | 6020B              | 10/24/2023 4:09:46 PM |
| SELENIUM                                     | 6010D              | 10/24/2023 2:52:37 PM |
| SEMIVOLATILE ORGANIC COMPOUNDS BY EPA SW-846 | METHOD 8270D/8000D | 10/24/2023 4:14:37 PM |
| SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION   | EPA 3510C          | 4/23/2008 12:00:00 AM |
| SILICA                                       | 6010D              | 10/24/2023 2:52:38 PM |
| SILVER                                       | 6020B              | 10/24/2023 4:09:46 PM |
| SILVER                                       | 6010D              | 10/24/2023 2:52:38 PM |
| SODIUM                                       | 6010D              | 10/24/2023 2:52:39 PM |
| SPE                                          | EPA 3535A          | 4/23/2008 12:00:00 AM |
| SPLP                                         | EPA 1312           | 5/29/2018 12:22:20 PM |
| STRONTIUM                                    | 6010D              | 10/24/2023 2:52:39 PM |
| SULFATE                                      | EPA 9056A          | 4/23/2008 12:00:00 AM |
| TCLP                                         | EPA 1311           | 2/25/2008 12:00:00 AM |
| THALLIUM                                     | 6020B              | 10/24/2023 4:09:47 PM |
| THALLIUM                                     | 6010D              | 10/24/2023 2:52:40 PM |
| TIN                                          | 6010D              | 10/24/2023 2:52:40 PM |
| TITANIUM                                     | 6010D              | 10/24/2023 2:52:40 PM |
| TOCS                                         | EPA 9060A          | 4/23/2008 12:00:00 AM |
| TOTAL METALS                                 | EPA 3010A          | 7/19/2023 8:53:59 AM  |
| ULTRASONIC EXTRACTION                        | EPA 3550C          | 4/23/2008 12:00:00 AM |
| VANADIUM                                     | 6020B              | 10/24/2023 4:09:47 PM |
| VANADIUM                                     | 6010D              | 10/24/2023 2:52:41 PM |
| VOCs by GC/MS, INCLUDING N-HEXANE            | EPA 8260D/8000D    | 10/24/2023 4:14:36 PM |
| WASTE DILUTION                               | EPA 3580A          | 4/23/2008 12:00:00 AM |
| ZINC                                         | 6020B              | 10/24/2023 4:09:48 PM |

**SW**

| Parameter       | EPA Method | Certified On          |
|-----------------|------------|-----------------------|
| ZINC            | 6010D      | 10/24/2023 2:52:41 PM |
| Total Count: 85 |            |                       |

**WW**

| Parameter                                     | EPA Method            | Certified On          |
|-----------------------------------------------|-----------------------|-----------------------|
| ALKALINITY, TOTAL                             | SM 2320B (2011)       | 9/29/2022 1:48:44 PM  |
| ALUMINUM                                      | EPA 200.8 (5.4)       | 9/29/2022 2:07:54 PM  |
| ALUMINUM                                      | EPA 200.7 (4.4)       | 2/11/2025 2:00:50 PM  |
| AMMONIA                                       | EPA 350.1 (2.0)       | 9/29/2022 1:52:42 PM  |
| ANTIMONY                                      | EPA 200.8 (5.4)       | 9/29/2022 2:08:41 PM  |
| ARSENIC                                       | EPA 200.8 (5.4)       | 9/20/2022 11:30:25 AM |
| BARIUM                                        | EPA 200.8 (5.4)       | 9/20/2022 11:44:23 AM |
| BASE/NEUTRALS AND ACIDS BY GC/MS<br>(12/2016) | 625.1                 | 10/12/2022 1:25:08 PM |
| BERYLLIUM                                     | EPA 200.8 (5.4)       | 9/29/2022 2:09:12 PM  |
| BORON                                         | EPA 200.7 (4.4)       | 9/29/2022 1:56:45 PM  |
| BROMIDE                                       | EPA 300.0 (2.1)       | 10/24/2023 9:28:42 AM |
| CADMIUM                                       | EPA 200.8 (5.4)       | 9/20/2022 11:44:56 AM |
| CALCIUM                                       | EPA 200.7 (4.4)       | 2/11/2025 2:00:50 PM  |
| CHLORIDE                                      | EPA 300.0 (2.1)       | 9/29/2022 1:58:55 PM  |
| CHROMIUM TOTAL                                | EPA 200.7 (4.4)       | 9/29/2022 2:10:26 PM  |
| CHROMIUM TOTAL                                | EPA 200.8 (5.4)       | 9/20/2022 11:45:39 AM |
| CHROMIUM(VI) HEXAVALENT                       | SM 3500-CR B (2011)   | 9/29/2022 2:09:54 PM  |
| COPPER                                        | EPA 200.8 (5.4)       | 9/29/2022 2:11:08 PM  |
| CYANIDE, TOTAL                                | SM 4500-CN BCE (2011) | 10/11/2022 4:23:37 PM |
| FLUORIDE                                      | EPA 300.0 (2.1)       | 9/29/2022 2:00:25 PM  |
| IRON                                          | EPA 200.7 (4.4)       | 2/11/2025 2:00:50 PM  |
| KJELDAHL, TOTAL NITROGEN                      | EPA 351.2 (2.0)       | 4/23/2008 12:00:00 AM |
| LEAD                                          | EPA 200.8 (5.4)       | 9/20/2022 11:46:26 AM |
| MAGNESIUM                                     | EPA 200.8 (5.4)       | 9/29/2022 2:12:33 PM  |
| MAGNESIUM                                     | EPA 200.7 (4.4)       | 2/11/2025 2:00:50 PM  |
| MANGANESE                                     | EPA 200.8 (5.4)       | 9/29/2022 2:13:01 PM  |
| MERCURY                                       | EPA 245.1 (3.0)       | 9/20/2022 11:47:21 AM |

## WW

| Parameter                                  | EPA Method           | Certified On          |
|--------------------------------------------|----------------------|-----------------------|
| NICKEL                                     | EPA 200.8 (5.4)      | 9/29/2022 2:13:29 PM  |
| NITRATE-NITRITE (AS N)                     | EPA 353.2 (2.0)      | 9/29/2022 2:01:59 PM  |
| NITRATE-NITRITE (AS N)                     | SM 4500-NO3 F (2011) | 2/11/2025 2:00:50 PM  |
| NITRITE (AS N)                             | SM 4500-NO2 B (2011) | 2/11/2025 2:00:50 PM  |
| ORTHOPHOSPHATE                             | SM 4500-P E (2011)   | 4/23/2008 12:00:00 AM |
| PFAS IN AQ., SOLIDS BY LC-MS/MS            | EPA 1633 (Jan 2024)  | 2/11/2025 2:00:50 PM  |
| PHOSPHORUS, TOTAL                          | EPA 365.4 (1974)     | 4/22/2009 12:00:00 AM |
| POTASSIUM                                  | EPA 200.8 (5.4)      | 9/29/2022 2:03:18 PM  |
| POTASSIUM                                  | EPA 200.7 (4.4)      | 2/11/2025 2:00:50 PM  |
| PURGABLE BY GC/MS (12/2016)                | EPA 624.1            | 10/12/2022 1:25:07 PM |
| RESIDUE, FILTERABLE (TDS)                  | SM 2540C (2011)      | 2/11/2025 2:00:50 PM  |
| SELENIUM                                   | EPA 200.8 (5.4)      | 9/20/2022 11:47:55 AM |
| SELENIUM                                   | EPA 200.7 (4.4)      | 9/29/2022 2:14:21 PM  |
| SILICA, DISSOLVED                          | EPA 200.7 (4.4)      | 9/29/2022 2:04:20 PM  |
| SILVER                                     | EPA 200.8 (5.4)      | 9/20/2022 11:48:33 AM |
| SODIUM                                     | EPA 200.7 (4.4)      | 2/11/2025 2:00:50 PM  |
| SULFATE                                    | EPA 300.0 (2.1)      | 9/29/2022 2:05:34 PM  |
| THALLIUM                                   | EPA 200.8 (5.4)      | 9/29/2022 2:15:01 PM  |
| TOTAL, FIXED AND VOLATILE SOLIDS IN SLUDGE | SM 2540G (2011)      | 9/29/2022 2:06:16 PM  |
| URANIUM                                    | EPA 200.8            | 5/29/2018 12:22:20 PM |
| VANADIUM                                   | EPA 200.8 (5.4)      | 9/29/2022 2:25:00 PM  |
| ZINC                                       | EPA 200.8 (5.4)      | 9/29/2022 2:28:07 PM  |

Total Count: 49

## Instrument

| Instrument                                   | Instrument Code | Quantity | Certified On          |
|----------------------------------------------|-----------------|----------|-----------------------|
| GAS CHROMATOGRAPH                            | GC              | 8        | 12/11/2018 8:33:48 AM |
| INDUCTIVELY COUPLED PLASMA/MASS SPECTROMETER | ICP/MS          | 1        | 1/8/2025 12:42:48 PM  |
| GAS CHROMATOGRAPH/MASS SPECTROMETER          | GC/MS           | 5        | 12/11/2018 8:33:48 AM |
| HIGH PERFORMANCE LIQUID CHROMATOGRAPH        | HPLC            | 2        | 12/11/2018 8:33:48 AM |

**Instrument**

| Instrument                                            | Instrument Code | Quantity | Certified On           |
|-------------------------------------------------------|-----------------|----------|------------------------|
| HIGH PERFORMANCE LIQUID<br>CHROMATOGRAPH/MASS<br>SPEC | HPLC/MS         | 1        | 12/18/2013 12:00:00 AM |
| ION CHROMATOGRAPH                                     | IC              | 3        | 12/19/2014 12:00:00 AM |
| AUTOMATED AUTOANALYZER                                | AUTOANALYZER    | 2        | 12/19/2014 12:00:00 AM |
| INDUCTIVELY COUPLED<br>PLASMA SPECTROMETER            | ICP             | 3        | 12/18/2013 12:00:00 AM |
| MERCURY ANALYZER                                      | MA              | 1        | 12/13/2007 12:00:00 AM |

Total Count: 9

**Software**

| Software Code                   | Certified On          |
|---------------------------------|-----------------------|
| ENVIROQUANT/CHEMSTATION - GC    | 3/11/2008 12:00:00 AM |
| ENVIROQUANT/CHEMSTATION - GC/MS | 3/11/2008 12:00:00 AM |
| HP CHEMSTATION-HPLC             | 3/11/2008 12:00:00 AM |
| SMACTCHEM - AUTO ANALYZER       | 3/11/2008 12:00:00 AM |
| OTHER - HPLC                    | 1/17/2012 12:00:00 AM |
| OTHER - ICP                     | 1/8/2020 2:07:11 PM   |
| OTHER - MERCURY ANALYZER        | 1/8/2020 2:07:11 PM   |
| CHEMSTATION - HPLC              | 12/19/2018 3:51:17 PM |
| AGILENT MASS HUNTER - ICP/MS    | 2/11/2025 2:00:50 PM  |

Total Count: 9