BIOSCIENCE PTY LTD ABN: 26 547 517 746
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# ANALYSIS REPORT

| | | | |
|---|---|---|---|
| CLIENT: | Eclipse | REPORT NO: | 2021_0919 |
| TEST REQUEST: | AS 4454-2012 Test Methods B-G, I-J(1) | LAB SAMPLE ID: | 2021_0919 |
| ADDRESS: | 40 Subiaco Square Rd, Subiaco WA | DATE RECEIVED: | 17/05/2021 |
| CLIENT SAMPLE ID: | Aquamor Mulch | DATE TESTED: | 18/05-27/05/2021 |
| SAMPLING LOCATION: | Abercrombie | DATE REPORTED: | 28/05/2021 |

**TEST RESULTS**

| Analyte | Result | Unit | AS4454 Compliance Requirement | |
|---|---|---|---|---|
| | 2021_0919 Aquamor Mulch | | Raw mulch | Pasteurized product |
| Electrical Conductivity | 0.281 | mS/cm | ≤10 | ≤10 |
| pH | 8.14 | | > 5 | >5 |
| Ammonium-N (in extract) | 0.92 | mg/L | NA | NA |
| Ammonium-N (dry weight) | 4.92 | mg/kg | | |
| Nitrate-N (in extract) | 0.418 | mg/L | | |
| Nitrate-N (dry weight) | 2.24 | mg/kg | NR | NR |
| Total N (dry weight) | 0.805 | % | ≥ 0.8(2) | ≥ 0.8(2) |
| Phosphate-P (in extract) | 0.017 | mg/L | ≤ 5(3) | ≤ 5(3), <1(4) |
| Phosphate-P (dry weight) | 0.091 | mg/kg | | |
| Total P (dry weight) | 0.006 | % | ≤ 0.1(3) | ≤ 0.1(3) |
| Carbon (dry weight) | 43.6 | % | ≥ 20 | ≥ 20 |
| C:N Ratio | 54.2 | | | |
| Organic Matter (dry weight) | 74.2 | % | | |
| Calcium (dry weight) | 8310 | mg/kg | | |
| Magnesium (dry weight) | 708 | mg/kg | | |
| Sodium (dry weight) | 246 | mg/kg | NR | < 10 000 |
| Potassium (dry weight) | 290 | mg/kg | | |
| **Chemical Contaminants(5)** | | | | |
| Arsenic | <0.001 | mg/kg | ≤ 20 | ≤ 20 |
| Cadmium | 0.96 | mg/kg | ≤ 1 | ≤ 1 |
| Chromium | 1.52 | mg/kg | ≤ 100 | ≤ 100 |
| Copper | 5.27 | mg/kg | ≤ 150(6) | ≤ 150(6) |
| Lead | <0.001 | mg/kg | ≤ 150 | ≤ 150 |
| Mercury | <0.001 | mg/kg | ≤ 1 | ≤ 1 |
| Nickel | 4.74 | mg/kg | ≤ 60 | ≤ 60 |
| Zinc | 4.12 | mg/kg | ≤ 300(6) | ≤ 300(6) |

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## TEST RESULTS

| Analyte | Result | Unit | AS4454 Compliance Requirement | |
|---|---|---|---|---|
| | 2021_0919 Aquamor Mulch | | Raw mulch | Pasteurized product |
| Phytotoxicity | 105 | Growth Index % | NR | NR |
| Wettability | 0:01 | minutes | NA | < 7:00 |
| Apparent Density | 0.280 | kg/L | | |
| Dry Bulk Density | 0.182 | kg/L | | |
| Moisture content (as received) | 34.8 | % | NR | 25-80.2(7) |
| **Particle Size Grading** | | | | |
| • > 16mm | 55.66 | % | | |
| • > 5mm to < 16mm | 42.12 | % | | |
| • < 5mm | 2.22 | % | | |
| **Physical Contaminants** | | | | |
| • glass, metal and hard plastic > 2mm | 0 | % | ≤ 0.5 | ≤ 0.5 |
| • light plastic, plastic film > 5mm | 0 | % | ≤ 0.05 | ≤ 0.05 |
| • stones and clods of clay >5mm | 0 | % | ≤ 5 | ≤ 5 |

NA = Not Applicable, NR = No Requirement

1) Appendix D includes the following parameters not tested by Bioscience Pty. Ltd.: boron, selenium, molybdenum, organohalides, chlorinated organic pesticides (OCPs), polychlorinated biphenyls (PCBs), and pathogens (Salmonella, Escherichia coli, thermotolerant coliforms).
(2) If a contribution to plant nutrition is claimed.
(3) For products that claim to be for P-sensitive plants.
(4) If applied to sandy soils.
(5) Where there are no currently applicable federal and state or territory provisions for composts, soil conditioners and mulches, products shall comply with the list of chemical contaminant upper limit values and labelling provisions as listed here. Note: non-conformance with this Standard does not indicate that the product may not otherwise be suitable for a range of specified applications that comply with other state or territory government regulations, guidelines or specified end user requirements. (From AS 4454-2012 Clause 2.1).
(6) A product that contains levels of total copper between 100-150 mg/kg and/or total zinc between 200-300 mg/kg (dry weight) whilst not exceeding the limit values, shall provide a warning label in accordance with the labelling requirements of Clause 5.3 of AS 4454-2012.
(7) Maximum = % OM + 6, when OM > 40%; maximum = % OM + 10 when OM < 40%.

Analysis: Sample was processed and sampled in accordance with AS 4454-2012 Standards. Electrical conductivity, pH, Ammonium-N, Nitrate-N and Phosphate-P AS 4454-2012 Appendix B. Total N, Carbon, C:N Ratio calculation, Organic Matter calculation AS 4454-2012 Appendix C. Total P, calcium, magnesium, sodium, potassium, arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc AS 4454-2012 Appendix D. Phytotoxicity/Bioassay alternate method AS 4454-2012 Appendix F as per Zucconi et al. 1981. Wettability AS 4454-2012 Appendix E. Apparent density and dry bulk density calculation AS 4454-2012 Appendix J. Moisture content AS 4454-2012 Appendix I. Particle size grading AS 4454-2012 Appendix G. Contamination AS 4454-2012 Appendix I.

These results reflect our findings for the received sample only.

Tested by: SM MV NG NT Date: 28/05/2021