REGEN SOILS

Bringing soils back to life

# AS4419:2018 SOILS FOR LANDSCAPING AND GARDEN USE REPORT

1 sample supplied by ReGen Soils on the 14 August 2023. Lab Job No. P4102.
Analysis requested by Declan McDonald**. Your Job: T&G**.
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| | Sample 1 | Guideline |
|---|---|---|
| Product Name: | T&G | |
| Product Type: | Soil | |
| Manufacturing Site: | Ecodynamics | |
| Manufactured Date: | .. | *AS4419:2018 Landscape Soils (On Grade)* |
| Test Code: | SS-PACK-120 | |
| Standard Applicable: | AS4419:2018 | |
| Section Applicable: | E 1 -/TABLE 1 - Landscape Soils (On Grade) | *Medium organic / High phosphorus* |

| Parameter | Method Reference | P4102/1 | | Interpretation |
|---|---|---|---|---|
| **Wet Bulk Density (kg/L)** | Appendix B | 0.87 | .. | This medium was assessed against the Australian Standard 4419 for Landscape Soils. Bulk density is acceptable and saturated bulk density is acceptable. |
| **Dry Bulk Density (kg/L)** | Appendix B | 0.63 | .. | |
| **Saturated Bulk Density (kg/L)** | Calculation | 1.30 | | |
| **Texture** | Appendix K | Sandy Loam | .. | The material is a sandy loam with slightly alkaline pH and acceptable EC. |
| **pH** | Clause 5.2 | 7.75 | *Alkaline Soil (7.6-9.0)* | |
| **Electrical Conductivity (dS/m)** | Appendix D | 1.45 | *< 1.75* | |
| **Air-filled Porosity (%)** | AS3743:2003 Appendix B | 9.9 | | Air-filled porosity and water holding capacity testing is not required for AS4419 but is included for information and completeness. Both are acceptable. |
| **Water Holding Capacity (%)** | | 56.6 | | |
| **Exchangeable Cation Method Used** | | 15C1 - Pretreatment | .. | Cation balance is close to optimal apart from potassium which is high. |
| **Exchangeable Calcium (meq/100g)** | | 8.78 | .. | Levels of all macro and micro elements are high indicating the basis for a fertile soil. The carbon to nitrogen ratio is above optimal. This indicates that some supplementary nitrogen may be required after planting. |
| **Exchangeable Magnesium (meq/100g)** | | 3.03 | .. | |
| **Exchangeable Potassium (meq/100g)** | | 2.08 | .. | |
| **Exchangeable Sodium (meq/100g)** | | 0.32 | .. | |
| **Exchangeable Aluminium (meq/100g)** | | 0.02 | .. | |
| **Effective Cation Exchange Capacity (meq/100g)** | | 14.2 | .. | Organic matter is high. The bioassay result is good. |
| **Exchangeable Calcium (%)** | % Calculation | 61.7 | *Alkaline Soil (50-90)* | The medium was tested for heavy metals and all are well below thresholds. Similarly, the medium was tested for traces of organochlorine pesticide. No traces were found. |
| **Exchangeable Magnesium (%)** | % Calculation | 21.3 | *10-30* | |
| **Exchangeable Potassium (%)** | % Calculation | 14.6 | *5-15* | |
| **Exchangeable Sodium Percentage (%)** | % Calculation | 2.25 | *Pre-treatment (< 10)* | |
| **Exchangeable Aluminium (%)** | % Calculation | 0.16 | .. | The material did not have any traces of glass or other physical contaminants. |
| **Calcium/Magnesium Ratio** | Calculation - Calcium/Magnesium | 2.89 | .. | |
| **Available Phosphorus P (mg/kg)** | Appendix F | 192 | *30-200* | Plant propagule testing showed no germination after 7 days. Final results will be provided once the 21 days results are in. |
| **Available Nitrate-N (mg/kg)** | Appendix E | 6.50 | .. | |
| **Available Ammonium-N (mg/kg)** | Appendix E | 81.9 | .. | |
| **Total Available Nitrogen N (mg/kg)** | Appendix E | 88.4 | *> 50* | |
| **Total Carbon (% dwb)** | | 11.6 | .. | |
| **Total Nitrogen (% dwb)** | | 0.4 | .. | |
| **Total Carbon to Total Nitrogen Ratio** | | 26.8 | .. | |
| **Total Organic Carbon (% dwb)** | Clause 5.6 | 13.5 | .. | |
| **Organic Matter (% dwb)** | Calculation - Total Organic Carbon x 1.7 | 21.8 | *15-25* | |
| **Large Particle > 5 mm Sieve (% by mass)** | | 6.7 | .. | |
| **Large Particle 2 - 20 mm Sieve (% by mass)** | | 20.2 | .. | |
| **Large Particle > 20 mm Sieve (% by mass)** | | 1.3 | *< 2* | |
| **Water Repellence (s)** | Appendix C | 13.7 | *≤ 60 s (water)* | |
| **Water Repellence (rating)** | Appendix C | Low | | |
| **Bioassay (mm)** | Appendix I | 65 | *> 60* | |
| **Total Aluminium (mg/kg)** | Clause 8.1 | 4,159 | .. | |
| **Total Arsenic (mg/kg)** | | 4.55 | *< 20 As* | |
| **Total Cadmium (mg/kg)** | | <0.5 | *< 1 Cd* | |
| **Total Chromium (mg/kg)** | | 22.4 | *< 100 Cr* | |
| **Total Copper (mg/kg)** | | 15.8 | *< 150 Cu* | |
| **Total Lead (mg/kg)** | | 19.1 | *< 150 Pb* | |
| **Total Mercury (mg/kg)** | | <0.1 | *< 1 Hg* | |
| **Total Nickel (mg/kg)** | | 24.3 | *< 60 Ni* | |
| **Total Selenium (mg/kg)** | | <1 | *< 5 Se* | |
| **Total Silver (mg/kg)** | | <1 | .. | |
| **Total Zinc (mg/kg)** | | 62.9 | *< 300 Zn* | |
| **Polychlorinated Biphenyls (mg/kg)** | Sub** - Symbio Laboratories B1373082-A | <0.1 ND | *< 0.3* | |
| **Organochlorine Pesticides - DDT, DDD, DDE (mg/kg)** | Sub** - Symbio Laboratories B1373082-B | <0.02 ND | *< 0.5* | |
| **Organochlorine Pesticides - Other (mg/kg)** see note 6 | | <0.02 ND | *< 0.02* | |
| **Glass, metal and rigid plastics (%) DW** | Clause 8.3 | <0.01 | *< 0.25* | |
| **Plastics - light, flexible or film (%) DW** | | <0.01 | *< 0.025* | |
| **Viable Plant Propagules (7 days)** | Appendix L | Nil | .. | |
| **Viable Plant Propagules (21 days)** | | To Come | *Nil after 21 days* | |