|  |  |  |
| --- | --- | --- |
| NaCl | Fisher Scientific | BP358‑1 |
| Methylene blue | Fisher Scientific | M291‑25 |

Acid rain

HCL 5.0 N Fisher Scientific LC15360 2

H2SO4 5N Fisher Scientific LC25840 2

CaCO3 Fisher Scientific C63 3

Na2CO3 Fisher Scientific S263 500

Buffer Pac Fisher Scientific SB105

NaHCO3 Fisher Scientific S233 500

Bromocresol Green Fisher Scientific B383 5

ethanol Fisher Scientific A962P 4

airation

|  |  |  |
| --- | --- | --- |
| red dye #40 | MG Newell | 07704‑1 |

Na2SO3 Fisher Scientific S430 500

CoCl2· 6H2O Fisher Scientific C371 100

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Composition of the synthetic wastewater** | | | |  |  |  |
|  | **Chemical** | **Molecular Weight** | **Concentration** | **total grams required** | **stock** | **stock concentration** |
| **Compound** | **Formula** | **g/mol** | **mg/L** | **g** |  |  |
| Starch |  | 40,000 | 84.40 | 162.048 | 1 | 100 |
| Casein |  | 30,000 | 125.00 | 240 | 1 | 100 |
| Sodium acetate | C2H3O2Na 3H20 | 136.1 | 31.90 | 61.248 | 1 | 100 |
| Capric acid | C10H20O2 | 172.3 | 11.60 | 22.272 | 1 | 100 |
| Ammonium chloride | NH4Cl | 53.5 | 75.33 | 144.6336 | 1 | 100 |
| Potassium phosphate | K2HPO4 | 174.2 | 6.90 | 13.248 | 1 | 100 |
| Sodium hydroxide | NaOH | 40.0 | 1.75 | 3.36 | 1 | 100 |
| Glycerol | C3H8O3 | 92.1 | 12.00 | 23.04 | 1 | 100 |
| Magnesium sulfate | MgSO47H2O | 246.5 | 69.60 | 133.632 | 2 | 1000 |
| Sodium molybdate | NaMoO42H2O | 241.9 | 0.15 | 0.288 | 2 | 1000 |
| Manganese sulfate | MnSO4H2O | 169.0 | 0.13 | 0.2496 | 2 | 1000 |
| Cupric sulfate | CuSO44H2O | 249.7 | 0.08 | 0.1536 | 2 | 1000 |
| Zinc suflate | ZnSO47H2O | 287.5 | 0.48 | 0.9216 | 3 | 1000 |
| Calcium chloride | CaCl22H2O | 147.0 | 22.50 | 43.2 | 3 | 1000 |
| Iron chloride | FeCl36H2O | 270.3 | 18.33 | 35.1936 | 3 | 1000 |
| Cobalt chloride | CoCl26H2O | 237.9 | 0.42 | 0.8064 | 3 | 1000 |
|  |  |  |  |  |  |  |