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## -CERTIFICATE OF ANALYSIS-

Product: G-418 Disulphate  
Code No: BIG0175  
CAS No: 108321-42-2  
Formula:  $C_{20}H_{40}N_4O_{10} \cdot 2H_2O_4S$   
Batch No: AS452484

| TEST   | SPECIFICATION   | RESULT                            |
|--|---|-----------------------------------|
| Elemental Analysis                                 | C: 28.8% ~ 36.07%<br>H: 5.76% ~ 7.76%<br>N: 6.72% ~ 8.41% | C: 31.01%<br>H: 7.09%<br>N: 7.19% |
| Waters of Hydration                                | 0 ~ 6   | 5                                 |
| Absorbance   |   |                                   |
| 570nm (100mg/ml)                                   | <0.1  | 0.006                             |
| 280nm (1mg/ml)                                     | <0.015  | 0.006                             |
| Potency (as is)                                    | NLT 700µg/mg  | 706µg/mg                          |
| Potency (on dried basis)                           | NLT 760µg/mg  | 762µg/mg                          |
| TLC Analysis                                       | Acceptable  | Acceptable                        |
| Specific rotation (C=1 in H <sub>2</sub> O @ 25°C) | +104° ~ +121°   | +118.3°                           |
| Biological potency test                            |   |                                   |
| ED <sub>50</sub> Sensitivity assay                 | ≤400µg/mg   | 360µg/mg                          |
| ED <sub>50</sub> Resistant assay                   | ≥2500µg/mg  | 2800µg/mg                         |
| Water (KF)   | <12.0%  | 8.06%                             |
| Ammonia  | <1.0%   | 0.015%                            |

Verified by: David Parton

Signed:

Date: 24<sup>th</sup> April 2015