**Cover Page for Supporting Information**

Manuscript title:Studies on Clarification of Coal Washery Effluent Using Polymeric Flocculants and Settling Kinetics

Contents:

Table 3 Major Equipment used for characterization

Table 5 The summary of the tests carried out their levels studied

Table 3 Major Equipment used for characterization

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| Sl.No. | Name of Equipment | Make | Model No. | State of Origin | Supplier | Type of Analysis |
| 1 | Multi-parameter Tester (Water Proof) | Eutech | pH Testr 30 | Singapore | M/s Excel International, Kolkata, India | Physical parameter characterization (pH, Temp. conductivity, TDS) |
| 2 | Turbidimeter | Eutech | TN-100 | Singapore | M/s, Science world, Nagpur, India | Turbidity |
| 3 | Photometer | Palintest | Photometer 7100 | UK | M/s, International Trade Links Instrumentation Pvt. Ltd., Kolkata, India. | Chemical Parameter (Hardness, Alkalinity, Chloride, Nitrate, sulphate) |
| 4 | Atomic Absorption Spectrophotometer | Thermo Fisher | iCE3300 system GFS33 | US | M/s, Thermo Fisher Scientific India Pvt. Ltd., Kolkata. | Fe, Al, Cu, Pb, Zn, Cd, As |
| 5 | Particle size analyser | Malvern | Hydero2000MU | UK | M/s,  Aimil Limited, Kolkata. | Size of coal & coal flocs |
| 6 | Thermogravimetric analyser | ELTRA Elemental Analyzers | EltraTGA Thermostep | Germany | Verder Scientific Private Ltd., Kolkata, India | Proximate analysis |
| 7 | CHNS analyzer | German | ElementarVario EL-III, S.No.-1101404 | India | Elementar India Pvt. Ltd., Gurgaon, India | Ultimate Analysis |
| 8 | Bomb calorimeter | LECO | AC-350 | USA | IR Technology Services Pvt. Ltd., Kolkata, India | GCV & grade |
| 9 | Thermal analyzer | NETZSCH, | Jupiter STA 449F3 | Germany | NETZSCH Technologies India Pvt. Ltd. Kolkata, India | TG-DTA analysis |
| 10 | XRD analyzer | Rigaku | Smart Lab Studio IIx64x4.3.177.0 IDNo.BD69000287-01 | Japan | IR Technology Services Pvt. Ltd., Kolkata, India | XRD analysis |
| 11 | FTIR spectrophotometer | Perkin Elmer | Spectrum 2.0 | US | Perkin Elmer (India) Pvt Ltd., Thane (MH), India. | FTIR analysis |
| 12 | Zeta Meter 4.0  with a microprocessor |  | Version 1.4 Rev 2c | Verginia | M/s Orbit Research Associates Pvt. Ltd., Delhi, India | Electrokinetic measurements (Zeta potential) |

Table 5 The summary of the tests carried out their levels studied

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| --- | --- | --- | --- | --- | --- |
| Variable studied | | | | | |
| Sl No | Category | Pulp density, % (w/w) | Floc Dosage, gpt | pH of Pulp | No. of Tests |
| 1 | Telfloc3674F (Cationic) | 3 | 2, 4, 6, 8 | 8.72 | 4 |
| 2, 4, 6, 8 | 4.00 | 4 |
| 2, 4, 6, 8 | 11.0 | 4 |
| 2 | Nalco-83370+ (Non-Ionic) | 3 | 2, 4, 6, 8 | 8.72 | 4 |
| 2, 4, 6, 8 | 4.00 | 4 |
| 2, 4, 6, 8 | 11.0 | 4 |
| 3 | Magna1011 (Anionic) | 3 | 2, 4, 6, 8 | 8.72 | 4 |
| 2, 4, 6, 8 | 4.00 | 4 |
| 2, 4, 6, 8 | 11.0 | 4 |
| Total Tests conducted | | | | | 36 |