TRAMFLOC, INC.
Water & Wastewater Treatment Chemicals for Industry & Mines
P. O. Box 350 Tempe, AZ 85280-0350 Voice: 480-491-6895 Fax: 480-383-6895
water@tramfloc.com www.tramfloc.com

POLYMER TESTING PROCEDURES FOR DEWATERING APPLICATIONS
"polytestsludg"

1. It is advantageous to perform bench scale evaluations in order to reduce the number of potentially successful Tramfloc® Polymer candidates as much as possible. Our emulsion polymers are numbered 100-399. Our granular polymers are numbered 400-499. You must make a dilute polymer solution to obtain accurate testing results. Do not dose neat polymer to your substrate sample.

2. It would be well to use 7 to 12 ounce, clear plastic cups to contain the polymer testing solution. Add 100 mls of warm tap water to each plastic cup, one for each Tramfloc® polymer to be evaluated. Mark each plastic cup with the appropriate Tramfloc® product number. For the Tramfloc® emulsion polymers charge 0.25 ml of neat formulation from a *1 cc plastic syringe* to 100 mls of warm tap water. Return the excess polymer to the sample bottle. Mix the testing solution polymer and water for about 20 seconds until the polymer has been well dispersed into the solution and it has become homogenized. You will have produced a 0.25 % polymer solution. We suggest that the samples stand quiescently for 10 minutes in order to allow the tightly wound polymer chains in Tramfloc® polymers to uncoil before they reach their full effectiveness.

3. If you are evaluating Tramfloc® granular polymers in our Tramfloc® 100 and 400 series, weigh 250 mg of polymer on a lab or portable scale and charge the granules very slowly to 100 mls of warm tap water to initially wet the granules. Add the granules almost singly so that they fall into the vortex of the water which is being stirred rapidly. That ratio will produce a 0.25 % polymer solution. Place the beaker on a heated magnetic stirrer, if available, for optimum results. Mix until all the granules have disappeared into a homogeneous solution without lumps or fish eyes. Reduce the speed to 50 rpm and after as much as 10-20 minutes of stirring, a clear, viscous and homogeneous solution should have been formed. The water and granules may be mixed vigorously in a stoppered flask for several minutes before quiescence. Each particle of dry polymer must be wetted with water to insure that a reliable testing solution has been prepared. Allow the solution to uncoil fully by causing the solution to stand quiescently for 10 minutes. Each solution container should be marked with the Tramfloc® polymer product number.

4. Charge about 200-300 mls of sludge/slurry to be dewatered into a new 7 to 12 ounce clear plastic cup, marked with the Tramfloc® polymer number to be tested. Add one to four or more full *3 cc syringes* of a Tramfloc polymer solution to the sludge and then pour the treated sludge into another clean plastic cup. Transfer the treated sludge sample and back and forth to the original container, five, six or more times to completely mix the Tramfloc polymer solution and the sludge sample. Experiment with various dosages as the results indicate.

5. See the dosage chart on the testing protocol page of our web site to calculate your dosage or call our product specialists who will perform the calculation for you.

6. Continue testing samples until you have applied all Tramfloc® polymer solutions in all the appropriate dosage ranges. Set each conditioned sludge cup aside and repeat the entire procedure until you have a 200 mls or so container of sludge/slurry, each treated with a different Tramfloc® dewatering polymer.

7. Observe which sample has the largest and densest floc particles/curds, with the clearest supernatant and the largest water cavities around the floc chunks. You have just selected the Tramfloc® polymer which should be further tested in a trial application. Congratulations! You have just selected the Tramfloc® polymer which should be used to dewater sludge/slurry in your system. You may now schedule a trial application of the new polymer.

8. Call us with any questions which may arise and please advise us of your final testing results.