



POLYACRYLAMIDE CONCENTRATION

Very often, mud systems may utilize a partially hydrolized polyacrylamide, PHPA, to provide or enhance inhibition by encapsulation of the polymer around the hydratable clays that are encountered while drilling. In order for this method of inhibition to be effective, a residual PHPA concentration must be present in the drilling mud filtrate.

Equipment		Product Code
1.	Hand cranking centrifuge	E83087
2.	2 graduated centrifuge tubes	E83089
3.	Floc developer solution	EY1070
4.	Cresol red indicator	EY1040
5.	Hydrochloric acid (0.2N)	EY1080
6.	Sodium hydroxide (0.2N)	EY1170

TEST PROCEDURE

1. Measure 12 mL fresh water into a test tube and place in centrifuge tube for balance.
2. Measure 10.0 mL filtrate in the graduated centrifuge tube.
3. Add 6 drops of cresol red indicator and with the tube covered invert gently. A reddish purple color will develop to indicate a pH greater than 7.0.
4. Add 0.2N hydrochloric acid, drop by drop, inverting gently each time until the solution just turns an orange-yellow.
5. Add 2mL floc developer solution.
6. Invert the tube gently to mix for 15-20 seconds, and allow the solution to stand for 3-4 minutes.
7. Invert the centrifuge tube a few times and place it in the centrifuge.
8. Centrifuge for one minute at a cranking speed of 120 revolutions per minute, (same as 10 revolutions every 5 seconds).
9. Remove the centrifuge tubes and note the amount of centrifuged precipitate as milliliters of precipitate.

CALCULATION

kg/m^3 polyacrylamide = 1.4 x mL precipitate.