Amine Determination

Procedure for Available Amine

1. Collect at least 4ml to a maximum of 9ml from the fluid loss test (more filtrate will provide more accurate results)
2. Add 1ml of 8N KOH to the filtrate to bring to 10ml total volume, dilute with distilled water to 10ml total volume if filtrate volume was less than 9ml in step 1.
3. Thoroughly clean 10ml retort cell and chamber and pack the chamber with new steel wool.
4. Add the filtrate to the cell and put assembly together using never-seez to seal threads.
5. Run retort and collect distilled fluid in 10ml graduated cylinder until the light turns off on the retort.
6. Transfer the distilled fluid into a 50ml beaker, rinsing the graduated cylinder with distilled water and adding that fluid to the 50ml beaker as well. Dilute with distilled water to 30ml total volume.
7. Add 2 drops of Phenolphthalein to the solution. If amine is present the solution should turn pink, if the solution stays clear there is no amine present.
8. If Amine is present titrate with N50 Sulfuric Acid until the color turns from pink to clear. Record the ml of N50 Sulfuric Acid used.

Procedure for Total Amine

1. Add 9ml of air free mud to a 10ml graduated cylinder and 1 ml of 8N KOH to bring the total volume to 10ml. Invert the graduated cylinder to mix the solution.
2. Follow steps 3 through 10 in the previous procedure.

Calculations

Available Amine

L/m3 Available Amin in water phase = **ml N50 Sulfuric * 2.90 / ml filtrate Collected**

Total Amine

L/m3 Total Amine in mud = **ml N50 Sulfuric Acid * 0.322**