

GIMPEX – IMERYS INDIA PRIVATE LIMITED

Determination of Methylene Blue Absorption Value of Bentonite

Responsibility: Chemist/Lab Assistant

Procedure:

- Take 0.5 gm of oven dried Bentonite powder and 4.5 gm of washed clay free silica sand
- > Mix thoroughly and transfer it in 250 ml of conical flask.
- Add 50 ml of distilled water and 10 ml of saturated TSPP solution in to the conical flask.
- > Stir the contents on a magnetic stirrer to disperse the Bentonite thoroughly.
- > Boil it on hot plate for 10 15 minutes and cool it. Add 1.5 ml of 0.5 N H2SO4
- > Titrate against 0.01 M methylene blue solution.
- > While adding 1 ml of methylene blue solution into flask, stir it on magnetic stirrer.
- After each edition, mix the content of flask for 30 second on magnetic stirrer and take one drop of solution by using glass rod on Whatman filter paper no. 1 or 4.
- The initial end point is reached when dye appears as faint blue ring or halo surrounding the dyed solids.
- When the initial end point is detected, stir the flask for an additional two minutes on magnetic stirrer and place another drop on filter paper.
- If the blue ring is again evident that mean two minutes end point has been reached.
- If the ring does not appear then continue the test until a drop taken after stirring two minutes shows the blue tint.
- > Note down the burette reading and calculate the MBA

Calculation:

MBA (mg/gm of clay) = Burette reading X 2 X 3.74

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