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CHEMICAL ANALYSIS AND RESEARCH

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April 20, 1989

RHONE-POULENC, INC.

Rhone-Poulenc Analytical Method No. 172

An Analytical Residue Method for the Determination of
O-Ethyl-S, S-DI-N-Propylphosphorodithioate (Ethoprop)
in Soil by Gas Chromatography (August 1984)

Rhone-Poulenc Study No.: EC/P-89-0012

PROCEDURE:

1. Homogenize the soil sample such that a representative sub-sample may be obtained (remove stones, sticks and other extraneous materials).
 2. Weigh 50 g of soil into a 500 mL erlenmeyer.
- NOTE: See the Rhone-Poulenc Protocol Study No.: EC/P-89-0012 for Soil Moistures. We will not be following Morse Labs SOP for Soil Moistures.
3. Add 100 mL MeOH to the bottle, cover with foil and tape foil around the neck of the erlenmeyer.
 4. Blend on a roller mill for 15 minutes (Morse Labs uses a platform shaker).
 5. Allow soil to settle out. Filter erlenmeyer contents through a buchner funnel with the aid of a mild vacuum. Rinse the erlenmeyer with 30 mL and pour into the buchner funnel.
 6. Discard the filter cake.
 7. Add 5 drops of 10% decanol in acetone to filtrate.
 8. Rotovap at 30-35°C to approximately 30 mL.
 9. Transfer to a 250 mL separatory funnel. Rinse the flask with 20 mL of MeOH and pour into the separatory funnel.

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10. Add to the separatory funnel 150 mL of the 10% aqueous sodium chloride solution.
11. Partition the aqueous solution two times with 100 mL portions of hexane.
12. Drain each 100 mL of hexane through Whatman #4 filter paper containing anhydrous sodium sulfate into a 400 mL beaker.
13. Add 5 drops of 10% decanol in acetone.
14. Place on steambath to evaporate. Be sure to place the beaker on top of the watchglass. If the beaker gets too cool, the hexane will pick up H₂O.
15. Evaporate down to 1-2 mL.
16. Transfer the 1-2 mL of hexane to a test tube. Continue the transfer using ETAC.