


Residue Chemistry

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Residue Chemistry

- Assess dietary exposure to pesticides
- Establish pesticide tolerances for enforcement



Residue Chemistry

- What is it?
 - Nature of residue studies (“NOR”)

- How much?
 - Analytical methods
 - Magnitude of residue studies (“MOR”)



Nature of Residue Studies

- Plant metabolism
- Livestock metabolism
- Confined rotational crops



Magnitude of Residue Studies

- Analytical methods
- Storage stability data
- Crop field trials
- Processed food/feed
- Meat/milk/poultry/eggs
- Field rotational crops



Nature of Residue: Livestock

- Required when applied to:
 - Livestock
 - Livestock premises
 - Livestock drinking water
 - Livestock feeds (crops)

- Test substance
 - PAIRA “or” plant metabolite



Independent Lab Validation (ILV) of Analytical Methods

- Enforce tolerances for residues in food
- PR Notices 88-5 and 96-1
- Methods received after 8/1/89
- Clearly written methods with complete directions
- Significant reduction in Agency resources
- Added level of confidence in residue data



Multiresidue Methodology

- Move from footnote under “Residue Analytical Method” to separate data requirement
- Clarify that metabolites in tolerance expression need to be tested
- Crucial for monitoring and enforcement by Federal and State agencies



Storage Stability Data

- Behavior of residues in stored samples
- Essential to validate magnitude of the residue (MOR) studies
- Previously required as part of MOR studies
- Make explicit requirement



Processed Food/Feed “Aquatic” Studies

- Change in test substances from EP to TEP



Meat/Milk,/Poultry/Eggs

➤ Proposing possible waiver if:

- Low residues in feed

OR

- Negligible transfer in livestock metabolism study



Rotational Crop Studies

- Move from environmental fate to residue chemistry
- Presence of residues is primarily dietary risk issue
- Need for field study determined by results of confined



Anticipated Residues

- New title replaces “Reduction of Residue”
- Actual residues in food as consumed
- Potential need for “single serving” data