Testing of Medicated Feeds & Premixes using Activity Based Tests

How can we substitute these
Compounds of Interest w/ Activity Based Methods

Bacitracin
Chlortetracycline
Erythromycin
Hygromycin
Lasalocid #*
Lincomycin
Monensin #*
Neomycin

Novobiocin
Nystatin
Oxytetracycline#*
Penicillin
Spectinomycin
Streptomycin
Tylosin
Virginiamycin
AAFCO PT Program Participation

Over 2017 and 2018 max # of labs reporting data based on activity

Bacitracin (4)
Chlortetracycline (6)
Oxytetracycline (4)
Monensin (2)
Tylosin (1)
Assays under Consideration

• Zone Inhibition assays
• Cylinder plate assay
• Turbidometric assays
Challenges with Current Methods

- Limited specificity
- Interferences
- Lots of variables
- Difficult to master
- Not well accepted globally
Chromatography Based Methods Challenges

• Multicomponent drugs
• In some drugs the components have a synergetic relationship
• Difficult to obtain sufficient amounts of pure components to detn their biological activity
Legislative Hurdles

• Precision expectations
• Equivalency expectations
• Risks associated with the opening of Masterfiles
• FDA acceptance
• Drug Sponsor acceptance
Approaches:

• Drug Sponsor develops and carries the new method through FDA approval
• 3rd Party develops method, takes it through collab study, publishes in JAOAC and submits method through AAFCO Masterfile w/ Drug Sponsor’s blessing