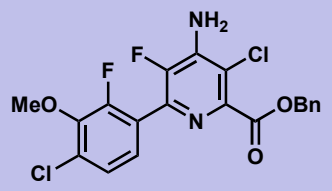
POTW: Rinskor Pt.II

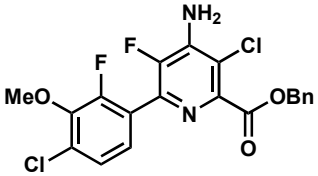


rinskor

Fast Facts:
- Agrochemical used for postemergent control of weed growth
- Major use is a rice herbicide
- American Chemical Society 2018 Green Chemistry Challenge Award Winner

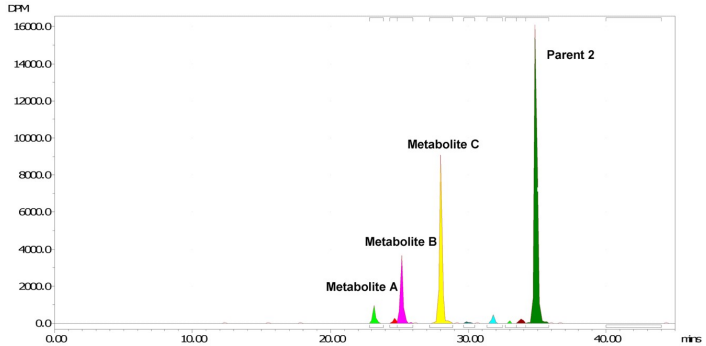
Metabolic Studies:
- Compounds that exceed certain trigger values (5% of applied mass) must have their structures determined
- Some compounds must be further studied for toxicity, hazards, etc.
- Please see *Siddiqi,* October 2019 (POTW)

CORTEVA™



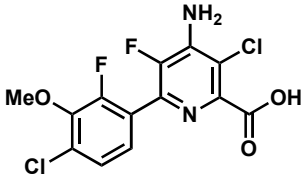
Each aryl group labelled with ^{14}C individually

4 different soils → 120g/hectare loading

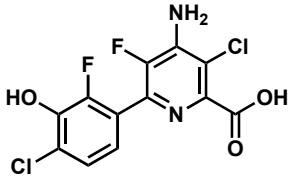


- Analysis was performed by GC
- 3 metabolites (A-C) were observed above the trigger value
- Metabolite B was not observed in UK soil
- Sub-milligram (GC-scale) quantities of each compound must synthesized to confirm metabolite identity

Metabolite identity:



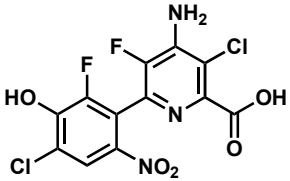
Metabolite A
standard synthesized previously

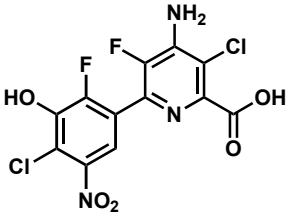


Metabolite C
standard synthesized previously

$C_{12}H_5Cl_2F_2N_2O_3$ ≡

Metabolite B
from MS and MS/MS analysis



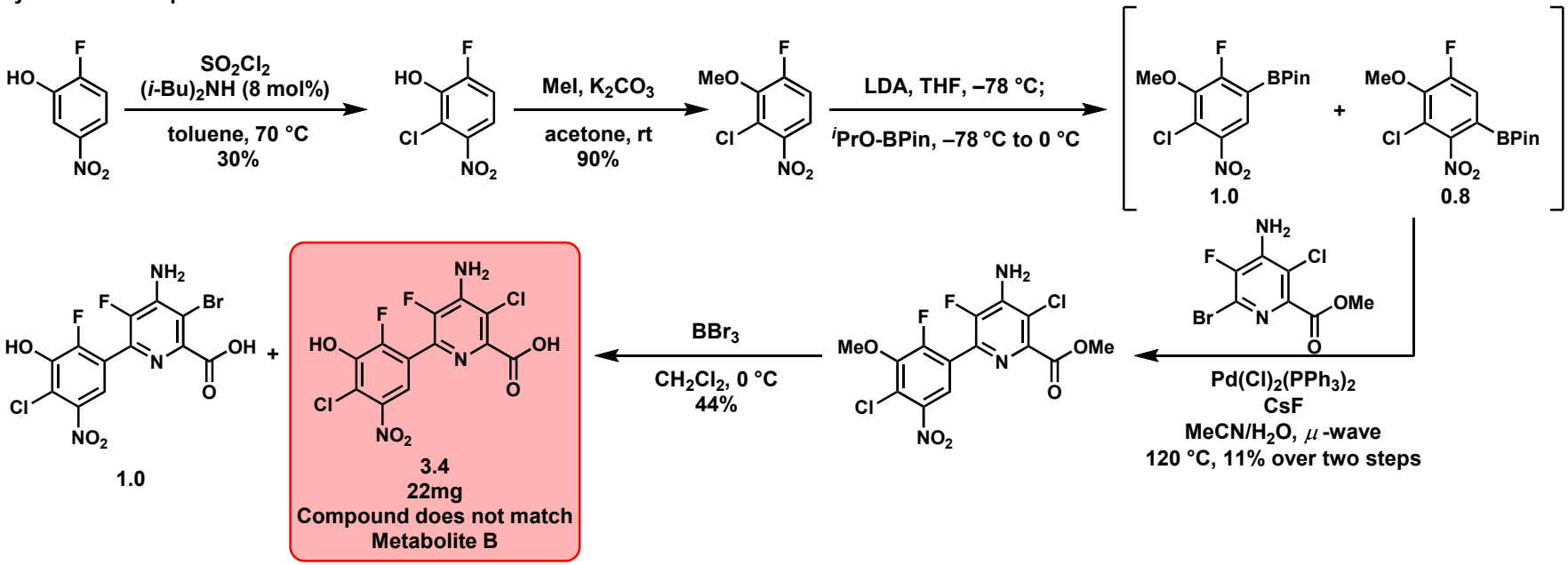


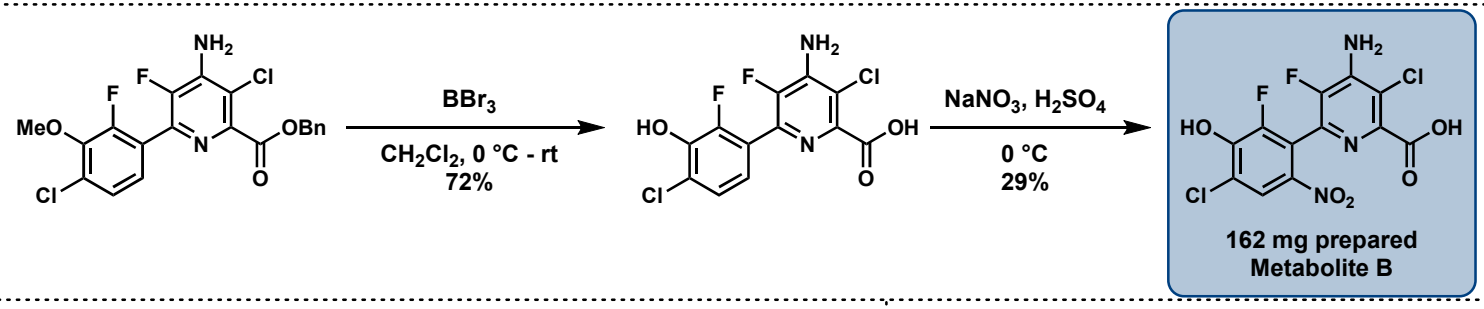
nitration is suspected
- generally uncommon metabolite

Org. Process Res. Dev. **2019**, *23*, 2234

POTW: Rinskor Pt.II

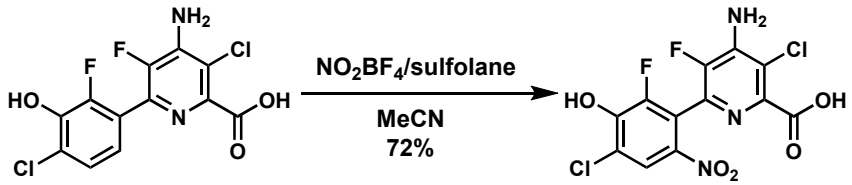
Synthesis of suspected metabolites





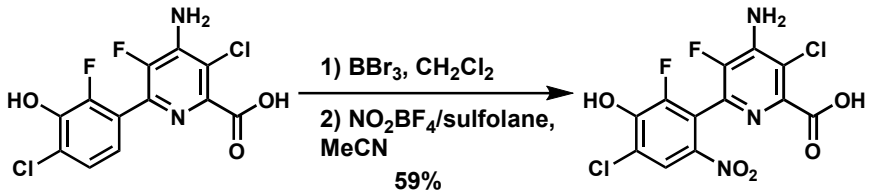
Metabolite B was found to have no off target effects

Scale-up Procedure to Metabolite B



8.13 g prepared

Procedure to make ^{14}C–Metabolite B



38 mg prepared