

ANNEX B

Metalaxyl-M

Appendix D : Metabolic pathways in animals and plants

rat

plant

goat - laying hen

ANNEX B

Metalaxyl-M

Appendix E : Chemical names of synthetic reference compounds

Chemical names of synthetic reference compounds from metalaxyl-M

| Metab. Code | Chemical name |
|--------------|----------------------------------------------------------------------------------------------|
| CGA-329351 | ((R)-2-(2,6 dimethylphenyl)-methoxyacetyl-amino)-propionic acid methyl ester |
| CGA - 48988 | N - (2,6 dimethylphenyl) - N - (methoxy-acetyl) - alanine methylester |
| CGA - 37734 | N - (2,6 dimethylphenyl) - 2 - hydroxyacetamide |
| CGA - 62826 | N - (2,6 dimethylphenyl) - alanine |
| CGA - 67866 | N - (2,6 dimethylphenyl) - alanine methylester |
| CGA - 67867 | N - (2,6 dimethylphenyl) - alanine |
| CGA - 67868 | N - (2,6 dimethylphenyl) - 2 - methoxyacetamide |
| CGA - 67869 | N - (2,6 dimethylphenyl) - N - (hydroxyacetyl) - alanine methylester |
| CGA - 68124 | [(2,6 dimethylphenyl) - amino] oxoacetic acid |
| CGA - 78532 | N - (carboxycarbonyl) - N - (2,6 dimethylphenyl) - alanine methylester |
| CGA - 79353 | N - (carboxycarbonyl) - N - (2,6 dimethylphenyl) - alanine methylester |
| CGA - 94689A | N - (2 - hydroxymethylene - 6 - methylphenyl) - N - (2'-methoxyacetyl) - alanine methylester |
| CGA - 94689B | N - (2 - hydroxymethylene - 6 - methylphenyl) - N - (2'-methoxyacetyl) - alanine methylester |
| CGA - 100255 | N-(2,6-dimethyl-5-hydroxyphenyl)-N-(methoxyacetyl)-alanine methylester |
| CGA - 107955 | N - (2,6 dimethylphenyl) - N - (hydroxyacetyl) - alanine |
| CGA - 108905 | N-(2-carboxy-6-methylphenyl)-N-(2'-methoxy-acetyl)-alanine methylester |
| CGA - 108906 | 2 - [(1 - carboxyethyl) (methoxyacetyl) amino] - 3 - methylbenzoic acid |
| CGA-119857 | N-(3-hydroxy-2,6-dimethylphenyl)-N-(methoxyacetyl)-alanine |
| Po | Free acid of CGA-94689 |
| P1 | N-(2-(hydroxymethyl)-6-methylphenyl)-N-(hydroxyacetyl)alanine |
| P2 | N-(2-(hydroxymethyl)-6-methylphenyl)-N-(hydroxyacetyl)alanine |
| Fat-U3 | Mixture of unresolved P1 and P2 |
| P3a | Glucuronic acid conjugate of CGA-67869 |
| P4 | Sulfate of CGA-108906 |
| N1a aglycone | N-((2-hydroxymethyl)-6-methylphenyl)-alanine/benzyl alcohol of CGA-67868 |
| N1b aglycone | N-(3-hydroxy-2,6-dimethylphenyl)-alanine/hydroxy phenyl ring of CGA-67868 |
| N2 | CGA-37734 glucoside |
| N3 | CGA-100255 glucoside |
| N4 | CGA-94689 A glucoside |
| N5 | CGA-94689 B glucoside |
| N6a/6b | CGA-62826 glucoside |
| N7 | CGA-107955 glucoside |
| B1/B2 | Benzyl alcohol of CGA-107955 |

| | |
|-----------|------------------------------------|
| PO | Benzyl alcohol of CGA-62826 |
|-----------|------------------------------------|

Occurrence of metabolites from metalaxyl-M in the various test systems of plants and animals

| Metab. Code | Rat | Goat | Hen | Grapevine (target crop) | Lettuce (target crop) | Potato (target crop) | Tobacco (target crop) | Rotational wheat stalks | Rotational sugar beet root | Rotational lettuce foliage |
|--------------------------------|-----|------|-----|-------------------------|-----------------------|----------------------|-----------------------|-------------------------|----------------------------|----------------------------|
| CGA - 48988/CGA-329351(parent) | x | - | x | x | x | x | x | x | x | x |
| CGA - 37734 | x | x | - | - | x | - | - | x | - | - |
| CGA - 62826 | x | x | - | x | x | x | - | x | x | - |
| CGA - 67866 | - | - | - | - | - | - | - | - | - | - |
| CGA - 67867 | x | - | - | - | - | - | - | - | - | - |
| CGA - 67868 | - | - | - | - | - | - | - | x | - | - |
| CGA - 67869 | x | x | x | - | x | - | - | x | - | - |
| CGA - 68124 | - | - | | - | - | - | - | - | - | - |
| CGA - 78532 | - | - | | - | - | - | - | - | - | - |
| CGA - 79353 | x | - | | - | - | - | - | - | x | - |
| CGA - 94689A | x | x | x | x | x | x | x | x | - | x |
| CGA - 94689B | x | x | x | x | x | x | x | x | - | x |
| CGA - 100255 | x | x | - | x | x | x | x | x | - | - |
| CGA - 107955 | x | x | x | x | x | x | x | x | - | x |
| CGA - 108905 | x | - | x | - | x | x | - | x | x | x |
| CGA - 108906 | -* | - | x | - | - | x | - | - | - | - |
| Po | - | - | x | - | - | - | - | - | - | - |
| P1 | - | - | x | - | - | - | - | - | - | - |
| P2 | - | - | x | - | - | - | - | - | - | - |
| Fat-U3 | - | - | x | - | - | - | - | - | - | - |

| Metab. Code | Rat | Goat | Hen | Grapevine (target crop) | Lettuce (target crop) | Potato (target crop) | Tobacco (target crop) | Rotational wheat stalks | Rotational sugar beet root | Rotational lettuce foliage |
|--------------|-----|------|-----|-------------------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------------|----------------------------------|
| P3a | - | - | x | - | - | - | - | - | - | - |
| P4 | - | - | x | - | - | - | - | - | - | - |
| M9 | x | - | - | - | - | - | - | - | - | - |
| N1a aglycone | - | - | - | - | - | - | - | x | x | - |
| N1b aglycone | - | - | - | - | - | - | - | - | - | x |
| N2 | - | - | - | - | - | - | - | x | x | x |
| N3 | - | - | - | - | - | - | - | x | x | x |
| N4 | - | - | - | - | - | - | - | x | x | x |
| N5 | - | - | - | - | - | - | - | x | x | x |
| N6a/6b | - | - | - | - | - | - | - | x | x | x |
| N7 | - | - | - | - | - | - | - | x | x | x |
| B1/B2 | - | - | - | - | - | - | - | x | x | - |
| PO | - | - | - | - | - | - | - | x | x | - |

* : CGA - 108906 was covered toxicologically by an acute oral toxicity study.

Notes :

- The presence of the metabolites CGA-68124, CGA-78532 and CGA-79353 was only postulated.
- The metabolites found back in rotational wheat stalks and in sugar beet root were characterized but not identified.

ANNEX B

Metalaxyl-M

Appendix F : Residue data from supervised trials

| Residues data from supervised trials | |
|------------------------------------------------------------------------------------------|----------|
| Crop | Pages |
| Citrus fruit (mandarins, oranges, grapefruit, lemons) | 12 pages |
| Pome fruit (Apples/Pears) | 5 pages |
| Apricots | 1 page |
| Cherries | 3 pages |
| Peaches (including nectarines) | 2 pages |
| Table and wine grapes | 17 pages |
| Strawberries | 6 pages |
| Avocados | 2 pages |
| Kiwi fruits | 3 pages |
| Sugar beets | 2 pages |
| Carrots | 4 pages |
| Onions | 7 pages |
| Tomatoes | 5 pages |
| Sweet peppers | 5 pages |
| Cucumbers | 5 pages |
| Melons | 5 pages |
| - Flowering brassica (broccoli/cauliflower/brussel sprouts) - Head brassica (cabbage) | 12 pages |
| Lettuce | 14 pages |
| Spinach | 5 pages |
| Beans (with pods) | 6 pages |
| Peas (with or without pods) | 6 pages |
| Globe artichokes | 1 page |
| Leeks | 1 page |
| Peas (pulses) | 1 page |
| Sunflower seeds | 2 pages |
| Rape seeds | 2 pages |
| Soybeans | 5 pages |
| Potatoes | 5 pages |
| Hops | 7 pages |
| Maize | 3 pages |
| Rice | 2 pages |
| Wheat | |
| Tobacco | 7 pages |

