

## Residue Findings of QuPPE-Compounds in Samples of Plant Origin from the German Market in 2020

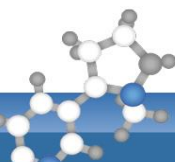
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The aim of this compilation is to give an overview as to which highly polar (QuPPE-) compounds are currently encountered in food products of plant origin. This should help other institutions when it comes to taking decisions on how to expand the scope of analytes, on how to plan the sampling and on which QuPPE compounds to target in certain types of samples.

At CVUA Stuttgart, 42 QuPPE-compounds were routinely monitored in 2020 (see Table 1).

**Table 1: Scope of QuPPE-compounds that were routinely monitored by the CVUA Stuttgart in 2020**

| Compound                      | Notes on legal limits                                 | General notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ammelide</b>               | Non-regulated metabolite and contaminant              | Ammelide can have various sources similar to ammeline. Melamine (see sources below) converts to cyanuric with ammelide (and ammeline) being formed as intermediates. Also reported as metabolite of triazine pesticides incl.: cyromazine (insecticide), anilazine (fungicide), terbuthylazine, prometryn, simazine, atrazine, ametrin, cyanazine (all herbicides). Among those, only terbuthylazine is currently approved within the EU.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ammeline</b>               | Non-regulated metabolite and contaminant              | Intermediate in the conversion of melamine to cyanuric acid. More info see Ammelide.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Amitrole</b>               |                                                       | Herbicide, the most important of the very few triazole pesticides with herbicidal properties. Approval expired in mid 2016.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bialaphos</b>              | Not specifically regulated, MRL of 0.01 mg/kg applies | Herbicide (transforms to glufosinate). Not listed in the EU active substances database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Bromide</b>                |                                                       | Reaction product of fumigant methylbromide. Also originating from irrigation water and soil. Counter ion of certain quarternary ammonium compounds e.g. benzalkonium, Didecyl Dimethyl Ammonium (DDA-), diquat and paraquat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Chlorate</b>               | New MRLs set in 2020                                  | Formerly used as herbicide, but nowadays mainly originating from chlorinated water used for irrigation or chlorinated water use to wash products and processing/storage equipment.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Chloridazon-desphenyl</b>  | Regulated metabolite                                  | Metabolite of chloridazon. Chloridazone approval expired 31/12/2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Chlormequat</b>            |                                                       | Growth regulator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Cyanuric acid</b>          | Non-regulated metabolite                              | Compound originating from multiple sources, e.g.:<br><b>Triazine pesticides</b> (incl. the herbicides terbuthylazine, atrazine, cyanazine, the fungicide; anilazine and the insecticide cyromazine). From the above only terbuthylazine and cyromazine are currently in use within the EU, with the latter having lost approval.<br><b>Cyanamide-based fertilizers.</b> Cyanamide contained in fertilizers may convert to melamine through trimerization, which can further hydrolyze to cyanuric acid.<br><b>Urea-based fertilizers or feed:</b> especially at high temperatures urea loses ammonia converting to isocyanic acid (HNCO), which trimerizes to cyanuric acid.<br><b>Mono-, Di- and Trichloroisocyanurates:</b> Used as disinfectants, algacides and bactericides. They are used in sanitation liquids and bleaching agents as well as in swimming pools (pool-tabs) to retard the loss of chlorine in chlorinated water. In water, they gradually convert to cyanuric acid. <b>Natural formation</b> of cyanuric acid has also been reported (e.g. in humus). |
| <b>Cyromazine</b>             |                                                       | Fungicide (EU-approval expired in Dec. 2019). Also used as an ectoparasiticide (e.g. on sheep, but not on lactating sheep) and as a biocide on manure against fly larvae                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Daminozide</b>             |                                                       | Approved growth regulator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Difenzoquat</b>            | Not specifically regulated, MRL of 0.01 mg/kg applies | Herbicide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Dimethoate-O-desmethyl</b> | Non-regulated metabolite                              | Also known as Metabolite X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Ethephon</b>               |                                                       | Growth regulator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



| Compound                            | Notes on legal limits                                                                           | General notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HEPA</b>                         | Non-regulated metabolite                                                                        | Metabolite of ethephon. Natural formation by bacteria under anaerobic conditions was reported. Detected by the EURL-SRM in all analyzed samples of bovine liver (levels around 0.5 mg/kg)                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>ETU</b>                          | Non-regulated degradant                                                                         | Degradant of ethylen-bis-dithiocarbamates. Mainly formed during processing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Fosetyl</b>                      |                                                                                                 | Approved fungicide (converts to phosphonic acid, which is the active component)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Phosphonic acid</b>              | Regulated with parent fosetyl                                                                   | Approved Fungicide, used as such and also formed as a metabolite of fosetyl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Glufosinate</b>                  |                                                                                                 | Herbicide, approval expired in mid-2018 and not renewed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>MPP (MPPA)</b>                   | Included in residue definition of glufosinate                                                   | Metabolite of glufosinate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>N-Acetyl Glufosinate</b>         | Included in residue definition of glufosinate                                                   | Metabolite of glufosinate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Glyphosate</b>                   |                                                                                                 | Herbicide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>AMPA</b>                         | Non-regulated metabolite.                                                                       | Metabolite of glyphosate. Planned inclusion in RD of glyphosate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>N-Acetyl-Glyphosate</b>          | Non-regulated metabolite.                                                                       | Metabolite of glyphosate. Planned inclusion in RD of glyphosate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>N-Acetyl-AMPA</b>                | Non-regulated metabolite.                                                                       | Metabolite of glyphosate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Maleic hydrazide</b>             |                                                                                                 | Approved sprouting inhibitor; Plant product MRLs set at 0.2* / 0.5* except for Potatoes, Carrots, Parsnips, Onions, Garlic, Shallots, Chicory                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Matrine</b>                      | Not approved. MRL of 0.01 mg/kg applies                                                         | Natural alkaloid, and classified as biopesticide in China. Contained in various plants of the genus Sophora. Cases of illegal addition of sophora root extracts in fertilizers in Italy. Sophora extracts also used in medical and cosmetics field. Anticancer properties reported.                                                                                                                                                                                                                                                                                                            |
| <b>Oxymatrine</b>                   | Not listed                                                                                      | Alkaloid present in Sophora extracts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Melamine</b>                     | Regulated by Reg. 1881/2006/EC as a contaminant                                                 | Metabolite of cyromazine (pesticide and vet. drug. May also originate from cyanamide fertilizers (trimerization of cyanamide). It may also originate from urea, where it is formed through trimerisation and elimination of ammonia and carbon dioxide, next to the non-cyclic dimer (biuret) and trimer (triuiret). Melamine hydrolyzes to cyanuric acid via ammeline and ammelide. Melamine is widely used in the synthesis of melamine-formaldehyde resins used in synthetic surfaces of furniture and textiles, kitchenware, moulding, packaging materials. Also used as a fire-retardant. |
| <b>Mepiquat</b>                     |                                                                                                 | Growth regulator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Mepiquat, 4-Hydroxy</b>          | Non-regulated metabolite                                                                        | Metabolite of mepiquat, mainly relevant for food of animal origin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Morpholine</b>                   | Not regulated as a pesticide                                                                    | Additive of waxes (typically added in a 1:1 Mixture with oleic acid) to assist emulsification in water.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Nereistoxin</b>                  | Non-regulated metabolite                                                                        | Transformation product of various members of the nereistoxin pesticides family, such as bensultap, cartap and thiocyclam                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Nicotine*</b>                    | MRLs set for rose hips, herbs and edible flowers, wild fungi, teas, herbal infusions and spices | Insecticide, contaminant from tobacco through air, soil and human contact.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Perchlorate</b>                  | Regulated as a contaminant Contaminant Reg. (EC) 1881/2006/EC                                   | Persistent and ubiquitous environmental contaminant. Mainly originating from fertilizers, may be also formed as a byproduct of disinfection of drinking water. Temporarily inhibits the intake of iodine in the thyroid gland.                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Propamocarb</b>                  | Approved                                                                                        | Fungicide, mainly relevant for vegetables, e.g. root, bulb, fruiting, leafy vegetables                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Propamocarb N-desmethyl</b>      | Non regulated metabolite                                                                        | Metabolite of propamocarb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Propamocarb-N-oxide</b>          | Non regulated metabolite                                                                        | Metabolite of propamocarb                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>PTU</b>                          | Regulated in infant- and baby food Reg. EC 125/2006 and 141/2006                                | Degradant of propineb. Mainly formed during processing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Pymetrozine, 6-hydroxymethyl</b> | Non-regulated metabolite                                                                        | Metabolite of pymetrozine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Thiocyanate</b>                  | No specific MRLs set, formally 0.01 mg/kg applies currently                                     | Non-approved active substance (fungicide). Also naturally formed in various cultivated plants of the brassica and allium family. Temporarily inhibits the intake of iodine in the thyroid gland.                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Trimesium</b>                    |                                                                                                 | Counter-ion of glyphosate, also naturally formed during the drying process of food                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Residue Findings:

In 2020, a total of 2108 samples, mainly fruit and vegetables, but also cereals, pulses, processed goods, tea and others, were analyzed for QuPPE-amenable compounds at the CVUA Stuttgart. 1621 samples (77 %) contained quantifiable residues of one or more of the tested QuPPE compounds. Table 2 shows a compilation of the results. *Cyanuric acid, phosphonic acid, perchlorate, chlorate and melamine* exceeded the respective reporting limits in **> 10 % of the samples**.

*Thiocyanate, propamocarb, trimesium, propamocarb-N-oxide, bromide, nicotine, ethephon metabolite HEPA, ammelide, dimethoate-O-desmethyl, propamocarb-N-desmethyl, glyphosate and chlormequat* exceeded the respective reporting limits in **1 - 10 % of the samples**.

*Chloridazon-desphenyl, maleic hydrazide, cyromazine, glufosinate met. MPPA, fosetyl/phosphonic acid, nereistoxin, morpholine, matrine, PTU, 4-hydroxy mepiquat, ETU, glufosinate, amitrole* exceeded the respective reporting limits in **0.1 -1% of the samples**.

The following compounds could not be detected or did not exceed their respective reporting limits: *Ammeline, bialaphos, daminozide, difenzoquat, N-acetyl-AMPA, N-acetyl-glufosinate, N-acetyl-glyphosate, oxymatrine and pymetrozine-6-hydroxymethyl*.

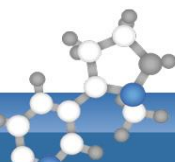
**Table 2: Residue findings of QuPPE-compounds (CVUA Stuttgart 2020)**

| Compound                 | # samples | # pos. | % pos. | Max (mg/kg) | Mean <sup>1)</sup> (mg/kg) | Median <sup>1)</sup> (mg/kg) | # >MRL <sup>2)</sup> | % >MRL | RL <sup>3)</sup> |
|--------------------------|-----------|--------|--------|-------------|----------------------------|------------------------------|----------------------|--------|------------------|
| Cyanuric acid            | 2105      | 751    | 36     | 10.8        | 0.062                      | 0.012                        |                      |        | 0.005            |
| Phosphonic acid          | 2105      | 507    | 24     | 587         | 5.8                        | 0.89                         | 10                   | 0.5    | 0.05             |
| Perchlorate              | 2105      | 370    | 18     | 1.8         | 0.045                      | 0.014                        | 5                    | 0.2    | 0.005            |
| Chlorate                 | 2105      | 329    | 16     | 5.5         | 0.062                      | 0.011                        | 5                    | 0.2    | 0.005            |
| Melamine                 | 2109      | 236    | 11     | 2.5         | 0.113                      | 0.033                        |                      |        | 0.005            |
| Thiocyanate              | 2104      | 182    | 8.7    | 964         | 21.4                       | 3.6                          |                      |        |                  |
| Propamocarb              | 2108      | 101    | 4.8    | 3.5         | 0.15                       | 0.041                        | 1                    | 0.05   | 0.005            |
| Trimesium                | 2108      | 67     | 3.2    | 1.5         | 0.13                       | 0.033                        | 18                   | 0.9    | 0.005            |
| Propamocarb-N-oxide      | 2108      | 66     | 3.1    | 0.28        | 0.036                      | 0.014                        |                      |        | 0.005            |
| Bromide                  | 2105      | 57     | 2.7    | 74.2        | 22                         | 15.8                         | 4                    | 0.2    | 5                |
| Nicotine                 | 796       | 50     | 6.3    | 1.9         | 0.10                       | 0.029                        | 19                   | 2.4    | 0.005            |
| Ethephon metabolite HEPA | 2104      | 46     | 2.2    | 10.4        | 0.60                       | 0.093                        |                      |        | 0.005            |
| Ammeline                 | 1880      | 46     | 2.4    | 0.15        | 0.030                      | 0.018                        |                      |        |                  |
| Dimethoate-O-desmethyl   | 2104      | 43     | 2      | 0.33        | 0.050                      | 0.023                        |                      |        |                  |
| Propamocarb-N-desmethyl  | 2108      | 37     | 1.8    | 0.14        | 0.022                      | 0.009                        |                      |        | 0.005            |
| Glyphosate               | 2063      | 29     | 1.4    | 13.1        | 0.74                       | 0.20                         | 2                    | 0.1    | 0.02             |
| Chlormequat chloride     | 2109      | 29     | 1.4    | 1.5         | 0.15                       | 0.036                        | 5                    | 0.2    | 0.005            |
| Ethephon                 | 2104      | 22     | 1      | 0.8         | 0.18                       | 0.093                        | 1                    | 0.05   | 0.02             |
| Mepiquat                 | 2108      | 21     | 1      | 0.071       | 0.017                      | 0.009                        |                      |        | 0.005            |
| Chloridazon-desphenyl    | 2108      | 18     | 0.9    | 0.13        | 0.019                      | 0.008                        |                      |        | 0.01             |
| Maleic hydrazide         | 2104      | 10     | 0.5    | 11.5        | 4.1                        | 3.2                          |                      |        | 0.01             |
| Cyromazine               | 2108      | 9      | 0.4    | 1.1         | 0.27                       | 0.052                        | 1                    | 0.05   | 0.01             |
| Glufosinate met. MPPA    | 2104      | 7      | 0.3    | 0.1         | 0.041                      | 0.033                        | 1                    | 0.05   | 0.01             |
| Fosetyl                  | 2105      | 6      | 0.3    | 1.1         | 0.46                       | 0.31                         |                      |        | 0.01             |
| Nereistoxin              | 2108      | 3      | 0.1    | 0.45        | 0.16                       | 0.016                        |                      |        | 0.005            |
| Morpholine               | 2109      | 3      | 0.1    | 20.1        | 13.3                       | 18.7                         |                      |        |                  |
| Matrine                  | 663       | 3      | 0.5    | 0.17        | 0.058                      | 0.002                        | 1                    | 0.2    |                  |
| PTU                      | 2108      | 2      | 0.09   | 0.019       | 0.012                      | 0.012                        |                      |        | 0.02             |
| Mepiquat, 4-hydroxy      | 2108      | 2      | 0.09   | 0.066       | 0.037                      | 0.037                        |                      |        | 0.005            |
| ETU                      | 2108      | 2      | 0.09   | 0.26        | 0.18                       | 0.18                         |                      |        | 0.02             |
| Glufosinate              | 2104      | 1      | 0.05   | 0.36        |                            |                              | 1                    | 0.05   |                  |
| Amitrole                 | 2108      | 1      | 0.05   | 0.01        |                            |                              |                      |        |                  |

<sup>1)</sup> Mean and median of positives

<sup>2)</sup> Numerical MRL-exceedances

<sup>3)</sup> RL= Reporting Limit (exemplary for fruits and vegetables)



## MRL exceedances

In 76 samples MRLs for different compounds were exceeded. Table 3 gives an overview of these exceedances.

**Table 3: Samples with residues of QuPpe-compounds exceeding existing MRLs\* (CVUA Stuttgart 2020)**

| Compound                                                                                                                           | Commodity                      | Country of Origin | Conc. (mg/kg) | >2x MRL** | Note    |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------------------|---------------|-----------|---------|
| <b>Bromide</b>                                                                                                                     | Brazil nut                     | Unknown           | 74.2          |           |         |
|                                                                                                                                    | Poppy seed                     | Unknown           | 27.9          |           |         |
|                                                                                                                                    | Sesame                         | India             | 27.9          |           | organic |
|                                                                                                                                    | Sesame                         | India             | 31.8          |           | organic |
| <b>Chlorate</b><br>(herbicide, but chlorinated water used in irrigation or sanitation mostly responsible for levels found in food) | Chia seeds                     | Unknown           | 0.26          | X         | organic |
|                                                                                                                                    | Sesame                         | Unknown           | 5.5           | X         |         |
|                                                                                                                                    | Nectarine                      | Spain             | 0.060         |           |         |
|                                                                                                                                    | Strawberry                     | Spain             | 0.086         |           |         |
|                                                                                                                                    | Tomato                         | Belgium           | 0.45          | X         |         |
|                                                                                                                                    |                                |                   |               |           |         |
| <b>Chlormequat chloride</b>                                                                                                        | Chili powder                   | Unknown           | 0.31          | X         |         |
|                                                                                                                                    | Chili powder                   | Unknown           | 0.18          |           |         |
|                                                                                                                                    | Strawberry, frozen             | Unknown           | 0.030         | X         |         |
|                                                                                                                                    | Paprika powder                 | Unknown           | 0.52          | X         |         |
|                                                                                                                                    | Paprika powder                 | Unknown           | 0.45          | X         |         |
| <b>Cyromazine</b>                                                                                                                  | Spring onion                   | Egypt             | 0.052         |           |         |
| <b>Ethephon</b>                                                                                                                    | Bell pepper                    | Hungary           | 0.089         |           |         |
| <b>Fosetyl, sum</b><br>(phosphonic acid was the only detected compound in most cases)                                              | Flour                          | Unknown           | 5.1           | X         |         |
|                                                                                                                                    | Poppy seed                     | Unknown           | 166           | X         |         |
|                                                                                                                                    | Papaya                         | Brazil            | 3.8           |           |         |
|                                                                                                                                    | Papaya                         | Brazil            | 5.5           | X         |         |
|                                                                                                                                    | Passion fruit                  | South Africa      | 5.8           | X         |         |
|                                                                                                                                    | Pomegranate                    | Turkey            | 3.4           |           |         |
|                                                                                                                                    | Garlic                         | China             | 3.0           |           |         |
|                                                                                                                                    | Garlic                         | Germany           | 5.8           | X         |         |
|                                                                                                                                    | Ginger                         | Peru              | 2.2           |           |         |
|                                                                                                                                    | Green beans                    | Egypt             | 3.0           |           |         |
|                                                                                                                                    | Green beans                    | Egypt             | 8.6           | X         |         |
|                                                                                                                                    | Green beans                    | Egypt             | 10.7          | X         |         |
|                                                                                                                                    |                                |                   |               |           |         |
|                                                                                                                                    |                                |                   |               |           |         |
| <b>Glufosinate Met. MPP</b>                                                                                                        | Mandarine                      | South Africa      | 0.10          |           |         |
| <b>Glyphosate</b>                                                                                                                  | Potato                         | Israel            | 0.36          |           |         |
|                                                                                                                                    | Spices                         | Unknown           | 0.44          | X         |         |
|                                                                                                                                    | Zucchini                       | Germany           | 13.1          | X         |         |
|                                                                                                                                    |                                |                   |               |           |         |
| <b>Matrine</b>                                                                                                                     | Chili peppers                  | Turkey            | 0.17          | X         |         |
| <b>Nicotine</b><br>(acaricide, but tobacco-related contamination mostly responsible for levels found in food)                      | Bean                           | China             | 0.036         | X         | organic |
|                                                                                                                                    | Sesame                         | India             | 0.011         |           |         |
|                                                                                                                                    | Sesame                         | India             | 0.016         |           |         |
|                                                                                                                                    | Sesame                         | India             | 0.023         | X         |         |
|                                                                                                                                    | Sesame                         | Unknown           | 0.046         | X         |         |
|                                                                                                                                    | Mandarine                      | Spain             | 0.032         | X         |         |
|                                                                                                                                    | Raspberry                      | Germany           | 0.013         |           |         |
|                                                                                                                                    | Oyster mushroom                | Poland            | 0.012         |           |         |
|                                                                                                                                    | Leafy vegetables, dried        | Germany           | 0.19          | X         |         |
|                                                                                                                                    | Wine leaves, prepared in brine | Unknown           | 0.038         | X         |         |
|                                                                                                                                    | Borecole                       | Germany           | 0.014         |           | organic |
|                                                                                                                                    | Lambs lettuce                  | Belgium           | 0.021         | X         |         |
|                                                                                                                                    | Lambs lettuce                  | Germany           | 0.015         |           |         |
|                                                                                                                                    | Lambs lettuce                  | Germany           | 0.018         |           |         |
|                                                                                                                                    | Lambs lettuce                  | Germany           | 0.023         | X         |         |
|                                                                                                                                    | Lambs lettuce                  | Germany           | 0.062         | X         |         |
|                                                                                                                                    | Leek                           | Germany           | 0.017         |           |         |
|                                                                                                                                    | Rucola                         | Germany           | 0.022         | X         |         |
|                                                                                                                                    | Rucola                         | Italy             | 0.012         |           |         |
|                                                                                                                                    |                                |                   |               |           |         |
|                                                                                                                                    |                                |                   |               |           |         |

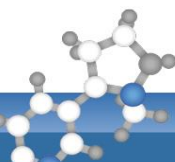
| Compound                                                                                                  | Commodity                      | Country of Origin | Conc. (mg/kg) | >2x MRL** | Note    |
|-----------------------------------------------------------------------------------------------------------|--------------------------------|-------------------|---------------|-----------|---------|
| <b>Perchlorate</b><br>(contaminant in fertilizers)                                                        | Brazil nut                     | Unknown           | 0.12          | X         |         |
|                                                                                                           | Brazil nut                     | Unknown           | 0.15          | X         |         |
|                                                                                                           | Brazil nut                     | Unknown           | 0.23          | X         |         |
|                                                                                                           | Brazil nut                     | Unknown           | 0.26          | X         |         |
|                                                                                                           | Pak choi                       | Germany           | 0.13          | X         |         |
| <b>Propamocarb</b>                                                                                        | Wine leaves, prepared in brine | Egypt             | 0.039         | X         |         |
| <b>Trimesium</b><br>(Counter ion of glyphosate but also natural formation during drying process of crops) | White button mushroom          | Germany           | 0.061         |           |         |
|                                                                                                           | Black tea                      | India             | 0.13          | X         |         |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.13          | X         | organic |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.084         |           |         |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.096         |           |         |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.098         |           |         |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.12          | X         |         |
|                                                                                                           | Black tea                      | Sri Lanka         | 0.2           | X         |         |
|                                                                                                           | Green tee                      | Japan             | 0.13          | X         | organic |
|                                                                                                           | Herbal tea                     | Unknown           | 0.13          | X         |         |
|                                                                                                           | Broccoli powder                | Germany           | 0.66          |           | organic |
|                                                                                                           | Beetroot powder                | Germany           | 0.81          | X         | organic |
|                                                                                                           | Beetroot powder                | European Union    | 0.59          |           | organic |
|                                                                                                           | Beetroot powder                | Kenia             | 0.13          | X         | organic |
|                                                                                                           | Rose hip powder                | Unknown           | 0.38          |           | organic |
|                                                                                                           | Rose hip powder                | Unknown           | 0.68          |           | organic |
|                                                                                                           | Beetroot powder                | Unknown           | 1.11          | X         | organic |
|                                                                                                           | Moringa powder                 | Unknown           | 1.46          | X         | organic |

\*

\*\* >2xMRL means that the sample exceeded MRL even after deducting measurement uncertainty of 50%

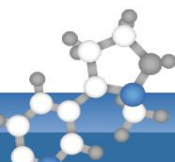
**Table 4: Top 15 residue levels of most frequently found QuPPE-compounds (with > 50 findings in total)**

| Compound                                                                                                                                                                                 | Commodity                  | Country of origin | Residue level (mg/kg) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------|-----------------------|
| <b>Cyanuric acid</b><br>(non-regulated pesticide metabolite and contaminant in fertilizers)                                                                                              | Avocado                    | Unknown           | 10.8                  |
|                                                                                                                                                                                          | Food supplement, spirulina | Germany           | 2.0                   |
|                                                                                                                                                                                          | Food supplement, spirulina | Germany           | 1.6                   |
|                                                                                                                                                                                          | Pomegranate                | Israel            | 1.4                   |
|                                                                                                                                                                                          | Oyster mushroom            | Poland            | 1.1                   |
|                                                                                                                                                                                          | Radish, small ~            | Germany           | 1.0                   |
|                                                                                                                                                                                          | Paprika powder             | Unknown           | 0.82                  |
|                                                                                                                                                                                          | Thyme, dried               | Unknown           | 0.65                  |
|                                                                                                                                                                                          | Potato                     | Germany           | 0.61                  |
|                                                                                                                                                                                          | Pineapple                  | Costa Rica        | 0.60                  |
|                                                                                                                                                                                          | Pineapple                  | Costa Rica        | 0.58                  |
|                                                                                                                                                                                          | Pineapple                  | Costa Rica        | 0.58                  |
|                                                                                                                                                                                          | Parsley, dried             | Unknown           | 0.57                  |
|                                                                                                                                                                                          | Prickly pear               | Italy             | 0.56                  |
|                                                                                                                                                                                          | Garlic                     | China             | 0.53                  |
| <b>Phosphonic acid</b><br>(Metabolite of Fosetyl but also used as such. Shows high persistence in plants, and residues in crops of perennial plants may originate from previous seasons) | Beer ingredients. hops     | Unknown           | 587                   |
|                                                                                                                                                                                          | Beer ingredients. hops     | Unknown           | 159                   |
|                                                                                                                                                                                          | Beer ingredients. hops     | Germany           | 146                   |
|                                                                                                                                                                                          | Poppy seed                 | Unknown           | 123                   |
|                                                                                                                                                                                          | Beer ingredients. hops     | Germany           | 119                   |
|                                                                                                                                                                                          | Blackberry                 | Germany           | 75.9                  |
|                                                                                                                                                                                          | Haselnut, ground           | Unknown           | 58.1                  |
|                                                                                                                                                                                          | Raspberry                  | Germany           | 51.3                  |
|                                                                                                                                                                                          | Blackberry                 | Germany           | 50.6                  |
|                                                                                                                                                                                          | Avocado                    | South Africa      | 47.2                  |
|                                                                                                                                                                                          | Strawberry                 | Germany           | 43.7                  |
|                                                                                                                                                                                          | Rucola                     | Germany           | 36.3                  |
|                                                                                                                                                                                          | Apple                      | Chile             | 34.0                  |
|                                                                                                                                                                                          | Chicory                    | Germany           | 31.7                  |
|                                                                                                                                                                                          | Pear                       | Italy             | 30.9                  |

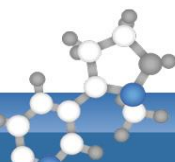


| Compound                                                                                                                                  | Commodity                    | Country of origin | Residue level (mg/kg) |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------|-----------------------|
| <b>Perchlorate</b><br><i>(Regulated as contaminant)</i>                                                                                   | Food supplement, moringa     | Germany           | 1.8                   |
|                                                                                                                                           | Moringa powder               | Germany           | 1.6                   |
|                                                                                                                                           | Dill, dried                  | Unknown           | 0.68                  |
|                                                                                                                                           | Oregano, dried               | Unknown           | 0.49                  |
|                                                                                                                                           | Cumin seeds                  | Egypt             | 0.44                  |
|                                                                                                                                           | Moringa powder               | Kenia             | 0.41                  |
|                                                                                                                                           | Food contact material, straw | China             | 0.32                  |
|                                                                                                                                           | Thyme                        | Unknown           | 0.30                  |
|                                                                                                                                           | Beetroot powder              | Unknown           | 0.30                  |
|                                                                                                                                           | Brazil nut                   | Unknown           | 0.26                  |
|                                                                                                                                           | Cumin seeds                  | Unknown           | 0.23                  |
|                                                                                                                                           | Brazil nut                   | Unknown           | 0.23                  |
|                                                                                                                                           | Lambs lettuce                | Germany           | 0.21                  |
|                                                                                                                                           | Laurel, dried                | Unknown           | 0.19                  |
|                                                                                                                                           | Brazil nut                   | Unknown           | 0.19                  |
| <b>Chlorate</b><br><i>(herbicide, but chlorinated water used in irrigation or sanitation mostly responsible for levels found in food)</i> | Sesame                       | Unknown           | 5.5                   |
|                                                                                                                                           | Chili powder                 | Unknown           | 1.9                   |
|                                                                                                                                           | Chili powder                 | Unknown           | 1.6                   |
|                                                                                                                                           | Paprika powder               | Unknown           | 1.0                   |
|                                                                                                                                           | Paprika powder               | Unknown           | 0.97                  |
|                                                                                                                                           | Broccoli powder              | Unknown           | 0.95                  |
|                                                                                                                                           | Tomato                       | Belgium           | 0.45                  |
|                                                                                                                                           | Romaine lettuce              | Spain             | 0.39                  |
|                                                                                                                                           | Leafy vegetables             | Niederlande       | 0.39                  |
|                                                                                                                                           | Aubergine                    | Spain             | 0.34                  |
|                                                                                                                                           | Chia seeds                   | Unknown           | 0.26                  |
|                                                                                                                                           | Food contact material, straw | Unknown           | 0.24                  |
|                                                                                                                                           | Green beans                  | Morocco           | 0.22                  |
|                                                                                                                                           | Beetroot powder              | Unknown           | 0.16                  |
|                                                                                                                                           | Avocado                      | Chile             | 0.12                  |
| <b>Melamine</b><br><i>(Metabolite of cyromazine, but also contaminant originating from multiple sources; regulated as contaminant)</i>    | Celeriac                     | Germany           | 1.2                   |
|                                                                                                                                           | Potato                       | Germany           | 1.1                   |
|                                                                                                                                           | Potato                       | Germany           | 0.98                  |
|                                                                                                                                           | Potato                       | Germany           | 0.84                  |
|                                                                                                                                           | Potato                       | Germany           | 0.79                  |
|                                                                                                                                           | Potato                       | Germany           | 0.74                  |
|                                                                                                                                           | Rucola                       | Germany           | 0.72                  |
|                                                                                                                                           | Celeriac                     | Germany           | 0.71                  |
|                                                                                                                                           | Lambs lettuce                | Belgium           | 0.67                  |
|                                                                                                                                           | Celeriac                     | Germany           | 0.55                  |
|                                                                                                                                           | Beer ingredients. hops       | Unknown           | 0.52                  |
|                                                                                                                                           | Cumin seeds                  | Unknown           | 0.52                  |
|                                                                                                                                           | Beer ingredients. hops       | Unknown           | 0.51                  |
|                                                                                                                                           | Parsley                      | Germany           | 0.49                  |
|                                                                                                                                           | Fennel                       | Germany           | 0.37                  |
| <b>Thiocyanate</b><br><i>(mostly of natural origin)</i>                                                                                   | Mustard seeds                | Unknown           | 964                   |
|                                                                                                                                           | Mustard seeds                | Unknown           | 734                   |
|                                                                                                                                           | Mustard seeds                | Unknown           | 652                   |
|                                                                                                                                           | Mustard seeds                | Unknown           | 418                   |
|                                                                                                                                           | Broccoli powder              | Germany           | 95.2                  |
|                                                                                                                                           | Savoy cabbage                | Germany           | 43.1                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 31.9                  |
|                                                                                                                                           | Cauliflower                  | Germany           | 27.8                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 25.8                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 23.7                  |
|                                                                                                                                           | White cabbage                | Germany           | 21.4                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 20.8                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 20.7                  |
|                                                                                                                                           | Brussels sprout              | Germany           | 20.6                  |
|                                                                                                                                           | Brussels sprout              | The Netherlands   | 19.8                  |



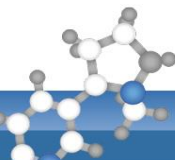


| Compound                                                                                                         | Commodity                          | Country of origin | Residue level (mg/kg) |
|------------------------------------------------------------------------------------------------------------------|------------------------------------|-------------------|-----------------------|
| <b>Propamocarb</b>                                                                                               | Oakleaf lettuce                    | Italy             | 3.53                  |
|                                                                                                                  | Oakleaf lettuce                    | France            | 1.4                   |
|                                                                                                                  | Lollo                              | Italy             | 1.2                   |
|                                                                                                                  | Cucumber                           | Spain             | 0.57                  |
|                                                                                                                  | Cucumber                           | Greece            | 0.54                  |
|                                                                                                                  | Cucumber                           | Spain             | 0.54                  |
|                                                                                                                  | Oakleaf lettuce                    | Germany           | 0.48                  |
|                                                                                                                  | Tomato                             | Belgium           | 0.41                  |
|                                                                                                                  | Cucumber                           | The Netherlands   | 0.35                  |
|                                                                                                                  | Broccoli                           | Spain             | 0.29                  |
|                                                                                                                  | Leafy vegetables, different salads | The Netherlands   | 0.28                  |
|                                                                                                                  | Cucumber                           | Spain             | 0.27                  |
|                                                                                                                  | Paprika powder                     | Unknown           | 0.27                  |
|                                                                                                                  | Cucumber                           | Spain             | 0.23                  |
|                                                                                                                  | Cucumber                           | Spain             | 0.22                  |
| <b>Trimesium</b><br><i>(Counter ion of glyphosate but also natural formation during drying process of crops)</i> | Beetroot powder                    | Unknown           | 1.46                  |
|                                                                                                                  | Rose hip powder                    | Unknown           | 1.11                  |
|                                                                                                                  | Beetroot powder                    | Germany           | 0.81                  |
|                                                                                                                  | Beetroot powder                    | Unknown           | 0.68                  |
|                                                                                                                  | Broccoli powder                    | Germany           | 0.66                  |
|                                                                                                                  | Beetroot powder                    | European Union    | 0.59                  |
|                                                                                                                  | Rose hip powder                    | Unknown           | 0.38                  |
|                                                                                                                  | Dill, dried                        | Unknown           | 0.28                  |
|                                                                                                                  | Parsley, dried                     | Unknown           | 0.25                  |
|                                                                                                                  | Broccoli powder                    | Unknown           | 0.20                  |
|                                                                                                                  | Black tea                          | Sri Lanka         | 0.20                  |
|                                                                                                                  | Herbal tea                         | Unknown           | 0.13                  |
|                                                                                                                  | Black tea                          | Sri Lanka         | 0.13                  |
|                                                                                                                  | Black tea                          | India             | 0.13                  |
|                                                                                                                  | Green tee                          | Japan             | 0.13                  |
| <b>Propamocarb-N-oxide</b>                                                                                       | Oakleaf lettuce                    | Italy             | 0.28                  |
|                                                                                                                  | Cucumber                           | Greece            | 0.26                  |
|                                                                                                                  | Lollo                              | Italy             | 0.25                  |
|                                                                                                                  | Cucumber                           | Spain             | 0.21                  |
|                                                                                                                  | Cucumber                           | Unknown           | 0.085                 |
|                                                                                                                  | Oakleaf lettuce                    | France            | 0.084                 |
|                                                                                                                  | Cucumber                           | Spain             | 0.076                 |
|                                                                                                                  | Cucumber                           | Spain             | 0.076                 |
|                                                                                                                  | Oakleaf lettuce                    | Germany           | 0.066                 |
|                                                                                                                  | Potato                             | Germany           | 0.044                 |
|                                                                                                                  | Melon                              | Italy             | 0.042                 |
|                                                                                                                  | Cucumber                           | Spain             | 0.042                 |
|                                                                                                                  | Cucumber                           | Spain             | 0.037                 |
|                                                                                                                  | Zucchini                           | Spain             | 0.034                 |
|                                                                                                                  | Cucumber                           | Spain             | 0.033                 |
| <b>Bromide</b>                                                                                                   | Brazil nut                         | Unknown           | 74.2                  |
|                                                                                                                  | Broccoli powder                    | Germany           | 54.0                  |
|                                                                                                                  | Barley grass powder                | New Zealand       | 51.7                  |
|                                                                                                                  | Rice                               | India             | 47.4                  |
|                                                                                                                  | Brazil nut                         | Unknown           | 46.3                  |
|                                                                                                                  | Brazil nut                         | Unknown           | 45.0                  |
|                                                                                                                  | Rucola                             | Italy             | 44.6                  |
|                                                                                                                  | Brazil nut                         | Unknown           | 43.7                  |
|                                                                                                                  | Brazil nut                         | Unknown           | 42.4                  |
|                                                                                                                  | Beetroot powder                    | European Union    | 40.2                  |
|                                                                                                                  | Molokhia leaves, dried             | Germany           | 39.0                  |
|                                                                                                                  | Rice                               | India             | 37.5                  |
|                                                                                                                  | Basil, dried                       | Unknown           | 32.6                  |
|                                                                                                                  | Sesame                             | India             | 31.8                  |
|                                                                                                                  | Figs                               | Turkey            | 29.5                  |

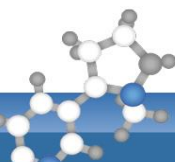

**Table 5: Top 10 residue levels of less frequently found QuPPE-compounds (with < 50 findings in total)**

| Compound                                                                                                             | Commodity                       | Country of origin | Residue level (mg/kg) |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------|-----------------------|
| <b>Nicotine</b><br><i>(acaricide, but tobacco-related contamination mostly responsible for levels found in food)</i> | Raspberry, frozen               | Serbia            | 1.9                   |
|                                                                                                                      | Black tea                       | India             | 0.47                  |
|                                                                                                                      | Black tea                       | India             | 0.34                  |
|                                                                                                                      | Moringa                         | Germany           | 0.24                  |
|                                                                                                                      | Wild mushroom, dried            | Germany           | 0.22                  |
|                                                                                                                      | Molokhia leaves, dried          | Germany           | 0.19                  |
|                                                                                                                      | Food supplement, moringa        | Germany           | 0.17                  |
|                                                                                                                      | Cinnamon                        | Unknown           | 0.094                 |
|                                                                                                                      | Black tea                       | Sri Lanka         | 0.087                 |
|                                                                                                                      | Food contact material, barbeque | Unknown           | 0.085                 |
| <b>HEPA</b><br><i>(Non-regulated metabolite of Ethephon)</i>                                                         | Food supplement, spirulina      | Unknown           | 10.4                  |
|                                                                                                                      | Food supplement, spirulina      | China             | 6.8                   |
|                                                                                                                      | Spirulina                       | Germany           | 3.7                   |
|                                                                                                                      | Food supplement, spirulina      | China             | 1.8                   |
|                                                                                                                      | Chili powder                    | Unknown           | 0.54                  |
|                                                                                                                      | Garlic                          | Spain             | 0.39                  |
|                                                                                                                      | White button mushroom           | Germany           | 0.37                  |
|                                                                                                                      | White button mushroom           | Germany           | 0.25                  |
|                                                                                                                      | White button mushroom           | Germany           | 0.23                  |
|                                                                                                                      | White button mushroom           | Germany           | 0.21                  |
| <b>Ammelide</b><br><i>(Metabolite of some triazine herbicides as well as of melamine, see above)</i>                 | Food supplement, spirulina      | China             | 0.15                  |
|                                                                                                                      | Food supplement, spirulina      | China             | 0.14                  |
|                                                                                                                      | Food supplement, spirulina      | China             | 0.13                  |
|                                                                                                                      | Potato                          | Germany           | 0.084                 |
|                                                                                                                      | King oyster mushroom            | Germany           | 0.077                 |
|                                                                                                                      | Spirulina                       | Germany           | 0.074                 |
|                                                                                                                      | Potato                          | Germany           | 0.069                 |
|                                                                                                                      | King oyster mushroom            | ROK               | 0.067                 |
|                                                                                                                      | Shiitake mushroom               | Germany           | 0.051                 |
|                                                                                                                      | Bean, without pods              | Unknown           | 0.046                 |
| <b>Dimethoate-O-desmethyl</b>                                                                                        | Garlic                          | Spain             | 0.33                  |
|                                                                                                                      | Garlic                          | Germany           | 0.27                  |
|                                                                                                                      | Chives                          | Germany           | 0.21                  |
|                                                                                                                      | Red cabbage                     | Germany           | 0.17                  |
|                                                                                                                      | Leek                            | Germany           | 0.13                  |
|                                                                                                                      | Black tea                       | India             | 0.12                  |
|                                                                                                                      | Onion                           | Germany           | 0.095                 |
|                                                                                                                      | Leek                            | Germany           | 0.078                 |
|                                                                                                                      | Celeriac                        | Germany           | 0.061                 |
|                                                                                                                      | Spring onion                    | Germany           | 0.057                 |
| <b>Propamocarb-N-desmethyl</b>                                                                                       | Oakleaf lettuce                 | Italy             | 0.14                  |
|                                                                                                                      | Oakleaf lettuce                 | France            | 0.091                 |
|                                                                                                                      | Cucumber                        | Greece            | 0.081                 |
|                                                                                                                      | Cucumber, prepared              | Unknown           | 0.071                 |
|                                                                                                                      | Lollo                           | Italy             | 0.055                 |
|                                                                                                                      | Cucumber                        | Spain             | 0.051                 |
|                                                                                                                      | Cucumber                        | Spain             | 0.028                 |
|                                                                                                                      | Oakleaf lettuce                 | Germany           | 0.024                 |
|                                                                                                                      | Cucumber                        | Spain             | 0.020                 |
|                                                                                                                      | Cucumber                        | Unknown           | 0.016                 |





| Compound                     | Commodity                | Country of origin | Residue level (mg/kg) |
|------------------------------|--------------------------|-------------------|-----------------------|
| <b>Glyphosate</b>            | Zucchini                 | Germany           | 19.2                  |
|                              | Zucchini                 | Germany           | 13.1                  |
|                              | Bean, without pods       | Unknown           | 1.7                   |
|                              | Lentil                   | Unknown           | 1.4                   |
|                              | Mustard seeds            | Unknown           | 0.65                  |
|                              | Mustard seeds            | Unknown           | 0.58                  |
|                              | Oregano, dried           | Unknown           | 0.50                  |
|                              | Coriander seeds          | Unknown           | 0.44                  |
|                              | Lentil                   | Turkey            | 0.41                  |
|                              | Yellow lentil            | Turkey            | 0.41                  |
| <b>Chlormequat chloride</b>  | Food supplement, curcuma | Germany           | 1.5                   |
|                              | Paprika powder           | Unknown           | 0.52                  |
|                              | Paprika powder           | Unknown           | 0.45                  |
|                              | Chili powder             | Unknown           | 0.31                  |
|                              | Cereal flakes & porridge | Unknown           | 0.27                  |
|                              | Rye flour                | Unknown           | 0.19                  |
|                              | Spices                   | Unknown           | 0.18                  |
|                              | Rye flour                | Germany           | 0.15                  |
|                              | Rye flour                | Germany           | 0.13                  |
|                              | Cereal flakes & porridge | Unknown           | 0.075                 |
| <b>Ethephon</b>              | Pineapple                | Costa Rica        | 0.80                  |
|                              | Raisin and sultana       | Unknown           | 0.79                  |
|                              | Grapes                   | South Africa      | 0.45                  |
|                              | Pineapple                | Costa Rica        | 0.28                  |
|                              | Grapes                   | Chile             | 0.28                  |
|                              | Sour cherry, frozen      | Unknown           | 0.21                  |
|                              | Grapes                   | South Africa      | 0.17                  |
|                              | Grapes                   | Chile             | 0.17                  |
|                              | Pineapple                | Costa Rica        | 0.14                  |
|                              | Apple                    | France            | 0.10                  |
| <b>Mepiquat</b>              | Paprika powder           | Unknown           | 0.071                 |
|                              | Paprika powder           | Unknown           | 0.060                 |
|                              | White button mushroom    | UK                | 0.052                 |
|                              | Chili powder             | Unknown           | 0.033                 |
|                              | White button mushroom    | Germany           | 0.015                 |
|                              | White button mushroom    | Germany           | 0.014                 |
|                              | White button mushroom    | Germany           | 0.013                 |
|                              | White button mushroom    | Germany           | 0.011                 |
|                              | White button mushroom    | The Netherlands   | 0.010                 |
|                              | White button mushroom    | Germany           | 0.010                 |
| <b>Chloridazon-desphenyl</b> | Rucola                   | Germany           | 0.13                  |
|                              | Dill, frozen             | Unknown           | 0.051                 |
|                              | Parsley, frozen          | Germany           | 0.035                 |
|                              | Siberian kale            | Germany           | 0.015                 |
|                              | Spinach, frozen          | Unknown           | 0.012                 |
|                              | Spinach                  | Germany           | 0.011                 |
|                              | Parsley                  | Germany           | 0.009                 |
|                              | Oakleaf lettuce          | Germany           | 0.009                 |
|                              | Green beans, frozen      | Unknown           | 0.008                 |
|                              | Green beans, frozen      | Unknown           | 0.008                 |



| Compound                    | Commodity             | Country of origin | Residue level (mg/kg) |
|-----------------------------|-----------------------|-------------------|-----------------------|
| <b>Maleic hydrazide</b>     | Potato                | Germany           | 11.5                  |
|                             | Potato                | Germany           | 9.3                   |
|                             | Onion                 | Germany           | 5.8                   |
|                             | Onion                 | Germany           | 3.9                   |
|                             | Potato                | Germany           | 3.2                   |
|                             | Onion                 | The Netherlands   | 3.1                   |
|                             | Potato                | Germany           | 2.1                   |
|                             | Potato                | Germany           | 1.4                   |
|                             | Onion                 | Germany           | 0.82                  |
|                             | Potato                | France            | 0.031                 |
| <b>Cyromazine</b>           | White button mushroom | Poland            | 1.1                   |
|                             | White button mushroom | Germany           | 0.88                  |
|                             | Chili peppers         | Turkey            | 0.18                  |
|                             | Cucumber              | Greece            | 0.16                  |
|                             | Spring onion          | Egypt             | 0.052                 |
|                             | Bean                  | Unknown           | 0.035                 |
|                             | Green beans           | Egypt             | 0.016                 |
|                             | Green beans           | Egypt             | 0.014                 |
|                             | Melon                 | Costa Rica        | 0.009                 |
| <b>Glufosinate Met. MPP</b> | Mandarine             | South Africa      | 0.10                  |
|                             | Currant               | Germany           | 0.057                 |
|                             | Grapes                | South Africa      | 0.042                 |
|                             | Nectarine             | Chile             | 0.033                 |
|                             | Raspberry, frozen     | Unknown           | 0.024                 |
|                             | Potato                | Israel            | 0.018                 |
|                             | Lemon                 | South Africa      | 0.012                 |