

## PESTICIDE GUIDE ON DEALING WITH RESIDUE OF PESTICIDES IN FEED MATERIALS

### PURPOSE

This document “*Pesticide guide*” describes how analysis results regarding residue of pesticide(s) in feed materials intended for the Dutch market, are assessed.

### INTRODUCTION

This document is based on the “*Pesticide guide*” as developed by the MRL meeting by the following parties<sup>1</sup>:

Parties	Scope	Website
	Compound feed, premixtures/additives, calf milk powder and wet products	<a href="http://www.nevedi.nl">www.nevedi.nl</a>
	Trade in grains, seeds and pulses	<a href="http://www.graan.com">www.graan.com</a>
	Wet feed	<a href="http://www.opnv.nl">www.opnv.nl</a>
	Processing oilseeds, refining of vegetable oils and fats	<a href="http://www.vernof.nl">www.vernof.nl</a>
	Production, processing and trade of oils and fats	<a href="http://www.mvo.nl">www.mvo.nl</a>
	Feed Specialties, animal health products	<a href="http://www.vddn.nl">www.vddn.nl</a>
	Production and trade in feed for direct delivery to farmers	<a href="http://www.securefeed.eu">www.securefeed.eu</a>

The *Pesticide guide* has been coordinated with the NVWA, the Dutch Ministry of Agriculture, Nature and Food Quality and the Dutch Ministry of Health, wellbeing and sports.

<sup>1</sup> The copyright of the *Pesticide guide* lies with SecureFeed, as does the management of the *Pesticide guide*.

## HISTORY OF THE DOCUMENT

Version	Version completion date	General	Changes	Publication date
2.0	26-08-2019	Final version for publication on website	Adjustments following parties in the MRL meeting	To be determined

## WORK METHOD

For the proper use of the *Pesticide guide* it is important to follow the following general rules:

1. Start every assessment at the beginning of the *Pesticide guide*, do not skip any steps. The assessment is a “peel-off model” in which options are increasingly eliminated. Starting the assessment at a random point in the *Pesticide guide* could lead to an incorrect assessment;
2. When a legal limit is exceeded, the NVWA and other organizations involved should be notified;
3. Sources of information that can help with pesticide assessment are listed in Annex 2.  
Always check whether the relevant link still leads to the most recent version of a source.  
Notify the manager of the *Pesticide guide* ([monitoring@securefeed.eu](mailto:monitoring@securefeed.eu)) when links are no longer functioning or information is outdated.  
Substantive comments on the *Pesticide guide* can be submitted to your branch organization (specified on the cover page), so they can be discussed during periodic consultations of parties involved in the development of the *Pesticide guide*.
4. In cases not covered by the *Pesticide guide* the company that had the sample analyzed shall assess the analysis results of pesticide(s) and the suitability of the relevant batch of feed material as feed;
5. When assessing analysis results, it is not permitted to take into account the measurement uncertainty of the analysis result. The NVWA states:  
*“Anyone who deals with feed must immediately notify the NVWA if he / she finds or suspects that the feed exceeds legal limit (without taking into account the measurement uncertainty), endangers human or animal health or is harmful to the environment”;*
6. The collaborating parties in the MRL consultation have drawn up the *Pesticide guide* with the greatest possible care. However, this does not relieve the user from his own responsibility to correctly apply the legislation. The *Pesticide guide* only aims to provide a guide on how to deal with a pesticide analysis result based on the current legislation. Therefore, the use of the *Pesticide guide* is entirely at one’s own risk. The collaborating parties cannot be held liable for the consequences of the use of the *Pesticide guide* in any way.
7. The *Pesticide guide* is coordinated with the competent authorities, but is not official legislation. No rights can therefore be derived from the results obtained with the use of the *Pesticide guide*.

Schema I - pesticide listed in Dir. 2002/32 EG	Explanation
<pre> graph TD     Start([Start]) --&gt; Step1([Feed material with pesticide analysis result exceeding detection limit])     Step1 --&gt; D1{1. Pesticide included in Annex I, section IV of Dir. 2002/32/EC?}     D1 -- NO --&gt; Step2([Feed material with pesticide analysis result exceeding detection limit, pesticide not included in Dir. 2002/32/EC])     Step2 --&gt; A((A))     D1 -- YES --&gt; Step3[2. Determine pesticide level based on 88% dry matter]     Step3 --&gt; D2{3. Level of pesticide (88% dry matter) &lt;= maximum level?}     D2 -- NO --&gt; Step4([Product does not meet standard])     Step4 --&gt; H((H*))     D2 -- YES --&gt; Step5([Product meets standard])     </pre>	<p><b>I. Pesticide included in Directive 2002/32/EG, Undesirable substances in feed, annex I, department IV</b></p> <p>1. When a pesticide analysis result above the detection limit is reported, check whether the pesticide involved is included in <a href="#">Directive 2002/32/EG, annex I, section IV</a>.          → If this is <b>not</b> the case, Directive 2002/32 does not apply to this pesticide. Proceed with the <i>Pesticide guide</i> at item <b>A</b>.          → If this <b>is</b> the case, go to step 2.</p> <p>2. Calculate the detected pesticide level based on 88% dry matter.          The maximum level of a pesticide in directive 2002/32 is expressed in mg pesticide per kg of feed with a moisture level of 12%. This is equivalent to mg pesticide per kg feed with 88% dry substance.          The calculation of the pesticide level based on 88% dry matter is explained in annex 1.          Go to step 3.</p> <p>3. Check whether the pesticide level (88% ds) is smaller or equal to the maximum level specified in the relevant product group.          → If this <b>is</b> the case, the analyzed sample meets the standard and the associated batch of feed can be processed.          The assessment can be completed.          → If this is <b>not</b> the case, the batch does not meet the limit.          Proceed with the <i>Pesticide guide</i> at item <b>H</b>.</p> <p>* : “Anyone involved in feed must immediately notify the NVA if he finds or suspects that the feed exceeds legal limits (without taking into account the measurement uncertainty), endangers human or animal health or is harmful to the environment.”</p>

Schema II - Pesticide and feed material listed in Reg. EC 396/2005	Explanation
<pre> graph TD     A((A)) --&gt; D1{1. Is the feed included in Reg. EC 396/2005 (EU Pesticides database) as such?}     D1 -- NO --&gt; E1(Feed material not in annex I Reg. EC 396/2005. Pesticide analysis result exceeds detection limit, pesticide not included in Dir. 2002/32/EC)     E1 --&gt; B((B))     D1 -- YES --&gt; D2{2. Is the pesticide included in Reg. EC 396/2005 (EU Pesticides database)?}     D2 -- NO --&gt; E2(Feed material in annex I Reg. EC 396/2005. Pesticide analysis result exceeds detection limit, pesticide not included in Dir. 2002/32/EC or Reg. EC 396/2005.)     E2 --&gt; C((C))     D2 -- YES --&gt; D3{3. Is the pesticide analysis result ≤ MRL?}     D3 -- NO --&gt; E3(Product does not meet MRL)     E3 --&gt; G((G))     D3 -- YES --&gt; E4(Product meets MRL)     </pre>	<p>Regulation 396/2005 together with its annexes, is very extensive. For that reason, in this section of the <i>Pesticide guide</i> reference is made to the EU Pesticide Database, in which EU legislation can be explored in a very user-friendly manner.</p> <ol style="list-style-type: none"> <li>1. Check whether the feed material is included in the <a href="#">EU Pesticide Database</a>              NOTE: For some feed materials (such as. Triticale, Spelt) the limits of a “main product” apply (in case of Triticale and Spelt, this is Wheat).              → If the feed material is <b>not</b> included in this database, this section does not apply for this feed material. Proceed with the <i>Pesticide guide</i> at item B.              → If your feed material <b>is</b> listed in this database, please proceed to step 2.</li> <li>2. Check whether the pesticide is included in <a href="#">EU Pesticide Database</a>              → If the detected pesticide <b>is not</b> included in this database, this section does not apply to this pesticide. Proceed with the <i>Pesticide guide</i> at item C.              → If the detected pesticide <b>is</b> included in this database, please proceed to step 3.</li> <li>3. Check whether the detected pesticide is smaller or equal to the MRL.              → If this <b>is</b> the case, the analyzed sample meets the limit and the associated batch of feed can be processed. The assessment can be completed.              → If this is <b>not</b> the case, the batch does not meet the MRL. Proceed with the <i>Pesticide guide</i> at item <b>G</b></li> </ol> <p>* : “Anyone involved in feed must immediately notify the NVWA if he finds or suspects that the feed exceeds legal limits (without taking into account the measurement uncertainty), endangers human or animal health or is harmful to the environment.”</p>

Schema III - Pesticide in Reg. 396/2005, feed material derived from product listed in Reg. 396/2005	Explanation
<pre> graph TD     B((B)) --&gt; D1{1. Is the feed derived from a product included in Reg. EC 396/2005 (EU Pesticides database)?}     D1 -- NO --&gt; E1(Feed material not derived from a product in annex I Reg EC 396/2005 OR excluded part of product in annex I Reg. EC 396/2005. Pesticide analysis result exceeds detection limit, pesticide not included in Dir. 2002/32/EC.)     E1 --&gt; D((D))     D1 -- YES --&gt; D2{2. Is the pesticide included in Reg. EC 396/2005 (EU Pesticides database)?}     D2 -- NO --&gt; E2(Feed material derived from product in annex I Reg. EC 396/2005. Pesticide analysis result exceeds detection limit, pesticide not included in Dir. 2002/32/EC or Reg. EC 396/2005.)     E2 --&gt; E((E))     D2 -- YES --&gt; D3{3. Is the pesticide analysis result ≤ MRL of the product named in Reg. EC. 396/2005?}     D3 -- NO --&gt; Next[See next page]     D3 -- YES --&gt; E3(Product meets MRL)     </pre>	<p>1. Check whether the feed material is derived from a product included in the <a href="#">EU Pesticide Database</a></p> <p>NOTE:</p> <ul style="list-style-type: none"> <li>- For some products (eg spelt) the limits of a "main product" (eg Spelt bran &gt; Spelt &gt; Wheat) apply.</li> <li>- Limits for grains apply to the grain (and products derived therefrom), not for other parts of the plant (straw, chaff, silage). To which product parts the standards apply in a general sense, is specified in <a href="#">column 6 of annex I of Reg. EC nr. 396/2005</a></li> </ul> <p>→ If the start product is <b>not</b> included in the EU Pesticide database, this section does not apply to your feed material. Proceed with the <i>Pesticide guide</i> at item D.</p> <p>If the start product <b>is</b> included in this database, please check <a href="#">column 6 of annex I of Reg. EC no. 396/2005</a> whether the limits apply to your product part.</p> <p>→ If the limits do <b>not</b> apply to your product part, this section does not apply for your feed material.. Proceed with the <i>Pesticide guide</i> at item D.</p> <p>→ If the limits <b>do</b> apply for your product part, please proceed to step 2.</p> <p>2. Check whether the pesticide is included in <a href="#">EU Pesticide Database</a></p> <p>→ If the detected pesticide is <b>not</b> included in this database, this section does not apply for this pesticide. Proceed with the <i>Pesticide guide</i> at item E.</p> <p>→ If the detected pesticide <b>is</b> included in this database? Go to step 3.</p> <p>3. Check whether the detected pesticide level in the derived product (the feed material) is smaller or equal to the MRL for the start product.</p> <p>→ If this <b>is</b> the case, the analyzed sample meets the MRL and the associated batch of feed can be processed. The assessment can be completed.</p> <p>→ If this is <b>not</b> the case, please go to step 4 on the next page.</p>

Schema III (continued) - Pesticide in Reg. EC 396/2005, feed material derived from listed product	Explanation
<pre> graph TD     Start([See previous page]) --&gt; D3{3. Is the pesticide analysis result ≤ MRL of the product named in Reg. EC 396/2005?}     D3 -- YES --&gt; P1([Product meets MRL])     D3 -- NO --&gt; D4{4. Does the pesticide concentrate in the feed material derived from the product in Reg. EC 396/2005?}     NVWA[NVWA accepted concentration factors] -.-&gt; D4     D4 -- YES --&gt; D5{5. Pesticide analysis result ≤ concentration factor * MRL of the starting product?}     D4 -- NO or UNKNOWN --&gt; D6{6. Does the (derived) product also have food applications?}     D5 -- YES --&gt; P1     D5 -- NO --&gt; D6     D6 -- YES --&gt; P2([Product does not meet MRL])     D6 -- NO --&gt; P3([Feed material derived from product in annex I Reg. EC 396/2005. Pesticide included in Reg. EC 396/2005. No food application.])     P2 --&gt; G((G*))     P3 --&gt; F((F**))     </pre> <p>*: "Anyone involved in feed must immediately notify the NVWA if he finds or suspects that the feed exceeds legal limits (without taking into account the measurement uncertainty), endangers human or animal health or is harmful to the environment".</p> <p>** : MRLs do not apply to products or part of products that by their characteristics and nature are used exclusively as ingredients of animal feed, until separate MRLs are set in the specific category 1200000 (foot note 1 Annex 1 Reg. EC 396/2005 as defined in Reg. (EU) 2018/62)</p>	<p>4. Check whether it is possible that the pesticide is concentrated in the feed material derived from the product in 396/2005. This can be the case when:</p> <ul style="list-style-type: none"> <li>the pesticide is fat-soluble and the feed material contains more fat than the start product</li> <li>the pesticide is water-soluble and the feed material is lower in fat than the start product</li> <li>the feed material is drier than the start product</li> </ul> <p>The concentration of a pesticide in a feed material relative to a start product is expressed with a concentration factor (also known as processing factor or transfer factor). If these concentration factors are accepted by the NVWA, they can be used to calculate a derived MRL for the feed material (see item 5). NVWA accepted concentration factors include</p> <ul style="list-style-type: none"> <li>Concentration factors published by EFSA and RIVM (see annex 2)</li> <li>Concentration factors based on fat content (see annex 2, MVO)</li> <li>Concentration factors based on drying (see annex 1)</li> </ul> <p>→ If there <b>are</b> known concentration factors OR the product is a wet byproduct or dried, proceed to step 5      → If there are <b>no</b> known concentration factors, proceed to step 6</p> <p>5. Check whether the detected pesticide level is less than or equal to the derived MRL (concentration factor * MRL of start product). If <b>yes</b> the product can be processed and the assessment can be completed. If <b>not</b>, proceed to step 6.</p> <p>6. If there are no known concentration factors, the same MRL applies to derived products (feed material) as to the start product. At that time it is important to determine whether the feed material also has food applications.</p> <p>→ If there <b>are</b> food applications, the batch does not meet the standard. Proceed with the <i>Pesticide guide</i> at item <b>G</b>      → If there are <b>no</b> food applications, this section does not apply for your feed material. Proceed with the <i>Pesticide guide</i> at item <b>F</b>.</p>

Schema IV - Feed material not derived from product or excluded part in Vo. 396/2005	Explanation
<pre> graph TD     D((D)) --&gt; Start([Feed material not derived from a product in annex I Reg. EC 396/2005 OR excluded part of product in annex I EC Reg. 396/2005. Pesticide analysis result exceeds detection limit, pesticide not included in Dir. 2002/32/EC.])     Start --&gt; D1{1. Is the analysis result ≤ 0,01 mg/kg***?}     Reg[Regulation 396/2005 art. 18 sub 1b.] -.-&gt; D1     D1 -- YES --&gt; End1([Product can be used as feed])     D1 -- NO --&gt; D2{2. The company decides to reject the batch}     D2 -- YES --&gt; End2([Product is not used as feed by the company])     D2 -- NO --&gt; S3[3. Draw up risk assessment]     S3 --&gt; D3{4. Product safe to use as feed?}     D3 -- NO --&gt; S5[5. Report to NVWA and other parties involved]     S5 --&gt; End2     D3 -- YES --&gt; S6[6. Archive risk assessment]     S6 --&gt; RA[Risk assessment]     RA --&gt; S7[7. Product can be used as feed within the preconditions of the risk assessments.]     S7 --&gt; End3([END])     </pre>	<p>The feed material is not derived from a product in annex 1 or is excluded part of a product in annex 1.</p> <ol style="list-style-type: none"> <li>Check whether the pesticide analysis result is below the EU default value of 0.01 mg/kg (product base)***.             <ul style="list-style-type: none"> <li>→ If this <b>is</b> the case, the associated batch of feed can be processed. The assessment can be completed.</li> <li>→ If this is <b>not</b> the case, proceed to step 2.</li> </ul> </li> <li>As a company, you can decide to reject a batch based on the analysis result without carrying out a risk assessment.. In this case, you notify the NVWA and other parties involved that you have rejected the batch with the analysis result (see step 5).</li> <li>Draw up a risk assessment to assess whether it is safe to use the product as feed (in the context of Regulation 178/2002, article 15).</li> <li> <ul style="list-style-type: none"> <li>→ If this is <b>not</b> the case, the associated batch of feed cannot be safely processed as feed within the preconditions of the risk assessment. Proceed to step 5.</li> <li>→ If this <b>is</b> the case, the associated batch of feed can be processed safely, in accordance with the restrictions as included in the risk assessment. Go to step 6.</li> </ul> </li> <li>Notify NVWA and other parties involved.</li> <li>Archive the risk assessment so that it can be made available.</li> <li>Use the product within the preconditions of the risk assessment</li> </ol> <p>*** In this, comparisons are made to the default MRL of the EU (0,01 mg/kg for those products for which no specific MRL is set out in Annexes II or III, or for active substances not listed in Annex IV unless different default values are fixed for an active substance while taking into account the routine analytical methods available (EC Reg 396/2005, art. 18 sub 1b)).</p>

<p><b>Schema V – Pesticide not listed in Dir. 2002/32/EG en Reg. EC 396/2005 or pesticide analysis result exceeds MRL (derived) product Vo. 396/2005</b></p>	<p><b>Explanation</b></p>
<p>***: Default MRL: 0,01 mg/kg for those products for which no specific MRL is set out in Annexes II or III, or for active substances not listed in Annex IV unless different default values are fixed for an active substance while taking into account the routine analytical methods available (EC Reg 36/2005 art. 18 sub 1b).</p> <p>****: In principle, a rejected product is not used as or in animal feed, unless the NVWA provided permission (for example, if re-analysis shows laboratory error occurred in the first analysis, if cleaning of the lot is possible etc.).</p>	<ol style="list-style-type: none"> <li>1. Check whether the pesticide level <math>\leq 0,01</math> mg/kg*** (product base). <ul style="list-style-type: none"> <li>→ If this <b>is</b> the case, the associated batch of feed can be processed. The assessment can be completed.</li> <li>→ If this is <b>not</b> the case, the pesticide analysis result is above the default MRL which applies for a non-included pesticide on a product listed in annex I of Reg 396/2005 (EC Reg 396/2005, art. 18 lid 1b). Go to step 2.</li> </ul> </li> <li>2. The product does not meet legal limits. NVWA must be notified and the batch must be rejected: <ul style="list-style-type: none"> <li>- H: Products intended for feeding animals may not be put on the market and / or used if the content of undesirable substances is higher than the maximum levels laid down in Annex I of Directive 2002/32 (Directive 2002/32, Article 3)</li> <li>- C, E, G : If it is known that a product does not comply with the MRL, it cannot be processed or mixed with the same or other products for the purpose of placing it on the market as a food or feed, or feeding it to animals (in the context of Regulation 396/2005, article 19), unless permission has been obtained from the NVWA for this.</li> </ul> <p>Go to step 6.</p> </li> </ol>

Diagram V (continued) – pesticide analysis result above MRL (derived) product Reg. 396/2005 in a feed material with only feed application	Explanation
<pre> graph TD     Start((F)) --&gt; NoMRL([No MRL applicable** (Footnote 1)])     NoMRL --&gt; Step3{3. The company decides to reject the batch}     Step3 -- YES --&gt; Step6[6. Report to NVWA and other parties involved]     Step3 -- NO --&gt; Step4[4. Draw up risk assessment]     Step4 --&gt; Step5{5. Product safe to use as feed?}     Step5 -- YES --&gt; Step7[7. Inform NVWA about analysis result and risk assessment]     Step5 -- NO --&gt; Step6     Step7 -- OBJECTION NVWA --&gt; Step6     Step6 --&gt; ProductNotUsed([Product is not used as feed****])     Step7 --&gt; Step8[8. Archive risk assessment and possible response NVWA]     Step8 --&gt; RiskAssessment[Risk assessment]     Step8 --&gt; Step9[9. Product can be used as feed within the preconditions of the risk assessment]     Step9 --&gt; End([END])     </pre>	<p>3. For products with only feed application, no MRL applies. As a company, you can decide to reject a batch based on the analysis result without carrying out a risk assessment. Go to step 6.</p> <p>4. Draw up a risk assessment to assess whether it is safe to use the product in or as feed (in the context of Regulation 178/2002, art. 15).</p> <p>5. → If this is <b>not</b> the case, the associated batch of feed is not safe to process as feed within the preconditions of the risk assessment. Go to step 6.  → If this <b>is</b> the case, the associated batch of feed can be safely processed in accordance with the limitations as included in the risk assessment. Go to step 7.</p> <p>6. Notify the NVWA and other parties involved about the rejection based on unsuitability (based on legal limits), unsafety (based on risk assessment) or other reasons. If the notified product has already been processed in another feed (such as a compound feed) a risk assessment must also be drawn up for this other product.</p> <p>7. Notify the NVWA about the analysis result and the risk assessment when you have assessed a product as safe. If you receive an objection from the NVWA, do not use the product as feed.</p> <p>8. Archive the risk assessment and any response of the NVWA, so that it can be made available.</p> <p>9. Use the product within the preconditions of the risk assessment.</p>
<p>** : MRLs do not apply to products or product parts that, as a result of their properties or nature are only used as feed ingredients, until, for the specific category, 1200000 individual MRLs have been specified (footnote 1 Annex 1 Reg. EC 396/2005 as defined in Reg. (EU) 2018/62).</p> <p>**** : In principle, a rejected product is not used as or in animal feed, unless the NVWA provided permission (for example, if re-analysis shows laboratory error occurred in the first analysis, if cleaning of the lot is possible etc.).</p>	

## Annex 1: Calculations with pesticide levels

### Conversion to 88% ds

This conversion is done for pesticides in Directive 2002/32, because this directive provides pesticide limits based on 88% dry matter.

$$\text{Pesticide level (88\% ds)} = \frac{88}{\% \text{ dry matter in product}} * \text{pesticide analysis result}$$

### Concentration factor based on drying

The limits in Regulation 396/2005 are on a product basis.

In diagram III, corrections can be made for drying (if not already included in the definition/normal state of the product) by applying a concentration factor.

$$\text{Concentration factor by drying} = \frac{\% \text{ dry matter in derived product}}{\% \text{ dry matter in product in Reg. EC 396/2005}}$$

### Fat-based concentration factor (fat-soluble pesticide)

In the EU pesticide database (F) is sometimes shown after the name of a pesticide. This means that it is fat-soluble.

In diagram III, corrections can be made for fat solubility by applying a concentration factor.

$$\text{Concentration factor based on fat} = \frac{\% \text{ fat in derived product}}{\% \text{ fat in product in Reg. EC 396/2005}}$$

For more explanation, see the MVO explanation of concentration factors in annex 2

**Annex 2: Information sources (last update: 20-06-2019)****National and international legislation and limits**

<b>NAAM*</b>	<b>URL*</b>
European feed legislation (via EU)	<a href="https://eur-lex.europa.eu/advanced-search-form.html?locale=en">https://eur-lex.europa.eu/advanced-search-form.html?locale=en</a>
Directive on Undesirable Substances in feed, Dir. 2002/32/EG	<a href="https://eur-lex.europa.eu/eli/dir/2002/32">https://eur-lex.europa.eu/eli/dir/2002/32</a>
Regulation setting maximum levels for pesticide residues in or on food and feed of vegetable and animal origin, Reg. (EC) nr. 396/2005	<a href="https://eur-lex.europa.eu/eli/reg/2005/396">https://eur-lex.europa.eu/eli/reg/2005/396</a>
Regulation EC 178/2002 (article 15)	<a href="https://eur-lex.europa.eu/eli/reg/2002/178">https://eur-lex.europa.eu/eli/reg/2002/178</a>
Regulation (EU) 2018/62 of January 17 <sup>th</sup> 2018 replacing Annex I of Regulation (EC) nr. 396/2005	<a href="https://eur-lex.europa.eu/eli/reg/2018/62">https://eur-lex.europa.eu/eli/reg/2018/62</a>
Pesticide web, main page	<a href="http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&amp;language=EN">http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&amp;language=EN</a>
Pesticide web, search page pesticides and products	<a href="http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=pesticide.residue.selection&amp;language=EN">http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=pesticide.residue.selection&amp;language=EN</a>
Pesticide web, search page products	<a href="http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=product.selection&amp;language=EN">http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=product.selection&amp;language=EN</a>
Pesticide web, search page active substances	<a href="http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=activesubstance.selection&amp;language=EN">http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=activesubstance.selection&amp;language=EN</a>
Commodities Act Regulation on pesticide residues	<a href="http://wetten.overheid.nl/BWBR0003658/">http://wetten.overheid.nl/BWBR0003658/</a> Dutch legislation (contains limits for piperonyl butoxide)
Codex Alimentarius, Codex Pesticides Residues in Food Online Database: main page	<a href="http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/">http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/en/</a>
Codex Alimentarius, Codex Pesticides Residues in Food Online Database: : search page pesticides	<a href="http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/pesticides/en/">http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/pesticides/en/</a>
Codex Alimentarius, Codex Pesticides Residues in Food Online Database: search page products	<a href="http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities/en/">http://www.fao.org/fao-who-codexalimentarius/codex-texts/dbs/pestres/commodities/en/</a>

*Note: always choose the consolidated version of EU legislation, which incorporates all changes that have been made over the years.*

**Published concentration factors**

<b>NAAM*</b>	<b>URL*</b>
Concentration factors vegetable fats and oils (MVO): explanation	<a href="https://www.mvo.nl/media/voedselveiligheid/version_3_dec_2018_final_mvo_notifying_requirements_on_pesticides_-no_logo.pdf">https://www.mvo.nl/media/voedselveiligheid/version_3_dec_2018_final_mvo_notifying_requirements_on_pesticides_-no_logo.pdf</a>
Concentration factors vegetable fats and oils (MVO): factors	<a href="http://www.fediol.be/data/fediol_11SAF181_3578.pdf">http://www.fediol.be/data/fediol_11SAF181_3578.pdf</a>
EFSA European database on processing factors	<a href="https://zenodo.org/record/1488653#.XQzTqukUkuX">https://zenodo.org/record/1488653#.XQzTqukUkuX</a>
Processing factors for vegetable products RIVM (in particular fruit and vegetables)	<a href="https://www.rivm.nl/en/chemkap">https://www.rivm.nl/en/chemkap</a>

**Sources of dry matter and fat contents (if not known from the sample itself))**

<b>NAAM*</b>	<b>URL*</b>
Dutch Food table	<a href="http://nevo-online.rivm.nl/Default.aspx">http://nevo-online.rivm.nl/Default.aspx</a> For dry matter contents of food
Centraal Veevoedkundig Bureau	<a href="http://www.cvbdiervoeding.nl/pagina/10081/downloads.aspx">http://www.cvbdiervoeding.nl/pagina/10081/downloads.aspx</a> For dry matter content of feed materials

**Risk assessment for consumers**

<b>NAAM*</b>	<b>URL*</b>
Risk assessment for the consumer when the maximum residue limit for pesticides is exceeded (MRL)	<a href="http://www.favv-afsca.be/plantaardigeproductie/gewasbeschermingsmiddelen/#PSTI">http://www.favv-afsca.be/plantaardigeproductie/gewasbeschermingsmiddelen/#PSTI</a> Calculation PSTI (Dutch)