

Decision chart for assessing residues and contaminants in Bud products

December 2021

The legal basis for assessing residues in organic products in Switzerland is the “Weisung zum Vorgehen bei Rückständen im Bio-Bereich” (“Directive on procedures in case of residue contamination in the organic sector”, German only) issued by the Swiss Federal Office for Agriculture (FOAG) and the Swiss Federal Food Safety and Veterinary Office (FSVO). This decision chart illustrates Bio Suisse’s stance on residues in Bud products.

Procedures if residues have been detected

- If residues exceed the intervention limit as defined by the [“Weisung zum Vorgehen bei Rückständen im Bio-Bereich”](#) (“Directive on procedures in case of residue contamination in the organic sector”, German only) issued by the FOAG and the FSVO, the affected products must be temporarily suspended from trade.
- Notify Bio Suisse (sarah.bulliard@bio-suisse.ch or residues@bio-suisse.ch) if
 - residues fall under category A–C according to this decision chart or residues exceed the intervention limit according to the directive issued by the FOAG and the FSVO, via the [Notification form for residues in Bud products](#);
 - residues fall under category D according to this decision chart or residues are below the intervention limit according to the directive issued by the FOAG and the FSVO, but are greater than 0.001 mg/kg, via the [Simplified notification form for residues in Bud products](#) (German and French only).
 - Bio Suisse will confirm receipt of the notification form.
- Notify the certification body (CB) as prescribed by the agreement with the certification body via the [Notification form for residues in Bud products](#) or the [Simplified notification form for residues in Bud products](#) (German and French only).
- Licensee, Bio Suisse and certification body in or outside of Switzerland: implement measures according to Table 2.
- A second analysis or an additional representative (and independent) sampling and analysis may be helpful for the assessment.
- The certification body decides whether products may be traded as prescribed by the Organic Farming Ordinance (OFO), possibly in consultation with the responsible enforcement agency. The certification body’s decision serves as the basis for trading under the Bud logo. In most cases, the decisions also apply to trade under the Bud logo, and it is not necessary for Bio Suisse to make a separate decision regarding trade.
- However, in individual cases and independent of decisions made by the certification body, Bio Suisse reserves the right to temporarily or permanently ban products from trade under the Bud logo and initiate investigations and measures on a case-by-case basis.
- Upon request, Bio Suisse will assist licensees and certification bodies in handling, investigating and assessing incidents of residue contamination in Bud products.
- For questions, please contact Sarah Bulliard (at sarah.bulliard@bio-suisse.ch or on +41 (0)61 204 66 17).

Bio Suisse’s general stance on residues

As part of Bio Suisse’s quality requirements, Bud products should contain no residues or as few traces of residues as possible. However, agricultural production is influenced by environmental factors. The environment is polluted by contaminants from traffic, industry and incineration. Furthermore, organic products are produced within the larger context of non-organic surroundings (e.g. in the vicinity of non-organic agricultural operations or operations that

process both non-organic and organic products). Residues therefore cannot be entirely avoided. For these reasons, Bio Suisse believes a zero-tolerance policy towards residues would be unfair and counterproductive. Bio Suisse assesses incidents of residue contamination in light of whether Bio Suisse standards were upheld and duty of care obligations were met. Should that be the case, then slight traces of residues in Bud products can be tolerated. In any case, potential measures for improvement must be assessed and implemented accordingly. Bio Suisse believes that declassification (i.e. rescinding organic certification) is only justified if there is evidence of violations of the Bio Suisse Standards, if duty of care obligations were not met and/or residue levels are high. For further information, see the position paper entitled "[Haltung von Bio Suisse zum Thema 'Rückstände'](#)" ("Bio Suisse's stance on residues", German and French only).

Assessing cases of Bud products containing residues and contaminants with regard to tradability

The table below provides an overview of Bio Suisse's stance on assessing residue contamination in Bud products (exceptions are given in Table 3 on page 7). Compliance with other Bio Suisse Standards is also required. In all cases, confirmation of the organic status by the certification body is required for trading under the Bud logo, possibly in consultation with the responsible enforcement agency. As a rule, the certification body's trade decision, which may be made in consultation with the responsible enforcement agency, also applies to trade under the Bud logo. However, in individual cases and independent of decisions by the certification body and the residue concentration, Bio Suisse reserves the right to temporarily or permanently ban products from trade under the Bud logo and initiate investigations and measures.

For food items intended for persons with special dietary requirements (e.g. infants and babies), the maximum levels of residue as given in the [FDHA Ordinance on Foodstuffs for Persons with Special Dietary Requirements](#) (SR 817.022.104 – Verordnung des EDI über Lebensmittel für Personen mit besonderem Ernährungsbedarf) apply.

Table 1: Bio Suisse's stance on trading products under the Bud logo depending on the level of residue contamination

Cat.	Residue level in the raw product ¹	Bio Suisse's stance on whether the product may be traded under the Bud logo	Measures
A	Residue level \geq tolerance threshold as prescribed by the PestRO²	These lots may not be traded under the Bud logo. ³ Implement measures as prescribed by the responsible enforcement agency.	According to Table 2 on page 5
B	0.02 mg/kg < residue level < tolerance threshold as prescribed by the PestRO	Trade under the Bud logo is possible in some cases. The certification body will decide on a case-by-case basis, possibly in consultation with the responsible enforcement agency.	
C	IL⁴ < residue level \leq 0.02 mg/kg	Trade under the Bud logo is possible in some cases. The certification body will decide on a case-by-case basis, possibly in consultation with the responsible enforcement agency.	
D	0.001 mg/kg < residue level \leq IL	These lots can be traded under the Bud logo. Confirmation of the organic status by the certification body is required.	
E	Residue level \leq 0.001 mg/kg	These lots can be traded under the Bud logo. Confirmation of the organic status by the certification body is required.	

Explanations for category A (Table 1):

For certain active ingredients, no specific tolerance threshold has been defined by the PestRO, and the standard tolerance threshold of 0.01 mg/kg applies. For others, depending on their approval status in Switzerland, a low tolerance threshold, e.g. of 0.01 mg/kg, has been defined. If in such cases it may be assumed that there was no improper use of plant protection products (e.g. in the case of pre-existing contamination), that there was no breach of duty of care obligations and that the detected concentration of the substance poses no health risk, Bio Suisse takes the stance that products containing such residues may reasonably be traded under the Bud logo in some cases. However, the certification body and/or responsible enforcement agency must examine the products and confirm that they can be traded and meet organic standards.

¹ Relevant residue concentrations as defined in the "Weisung zum Vorgehen bei Rückständen im Bio-Bereich" ("Directive on procedures in case of residue contamination in the organic sector") issued by the FOAG and the FSVO for individual substances in raw products or as defined by the FDHA Ordinance on the Maximum Residue Levels for Pesticides in or on Products of Plant and Animal Origin (PestRO) (VPRH, SR 817.021.23). For exceptions and explanatory notes, please see page 7 of this document.

² PestRO: [FDHA Ordinance on the Maximum Residue Levels for Pesticides in or on Products of Plant and Animal Origin](#) (VPRH, SR 817.021.23); based on the [EU Pesticides database](#).

³ In the case of animal feed and seed, it may be possible to trade a product under the Bud logo even if the residue concentration is greater than the tolerance threshold defined by the PestRO, depending on the results of assessments made on a case-by-case basis.

⁴ IL: Intervention limit as defined by the "Weisung zum Vorgehen bei Rückständen im Bio-Bereich" ("Directive on procedures in case of residue contamination in the organic sector") (FOAG/FSVO).

Explanations for category C (Table 1):

Many years of experience in assessing pesticide contamination in Bud products have led to the conclusion that residues of up to 0.02 mg/kg (actual measured value) were usually not due to improper use, but rather resulted from inadvertent contamination. In most cases, the exact cause of contamination cannot be determined or can only be surmised. If no suspicion exists that standards have been compromised, and if traceability is ensured, Bio Suisse sees no reason to rescind the Bud status of products containing residues of up to 0.02 mg/kg, provided that the certification body or the responsible enforcement agency has cleared their organic status. However, if necessary, measures to improve the prevention of residue contamination in future lots will be introduced.

Measures to be taken in the event of contamination

The required measures given in the following table serve Bio Suisse in assessing residue contamination and devising measures to improve future deliveries.

Table 2: Measures to be taken by the licensee, Bio Suisse and the certification body in or outside of Switzerland

Cat.	Measures to be taken by the licensee	Measures taken by Bio Suisse	Measures to be taken by the certification body of operations in Switzerland	Measures to be taken by the certification body of operations outside of Switzerland
A	<ul style="list-style-type: none"> ▪ Suspend trade of these and all other lots of the same origin (e.g. supplier, producer) in consultation with the responsible enforcement agency. ▪ Notify Bio Suisse and the organic certification body (via the Notification form for residues in Bud products) and also provide your own statement and a statement from the supplier. ▪ These lots must be recalled after consulting with the responsible enforcement agency. 	<ul style="list-style-type: none"> ▪ If warranted, temporarily or permanently halt trade of the product, further lots and/or trade with the supplier. Also refer to “Explanations for category A” on page 3. ▪ Check traceability and compliance with duty of care obligations, and seek the source of contamination. ▪ Take measures to prevent future incidents of contamination. 	<ul style="list-style-type: none"> ▪ Temporarily or permanently halt trade of the product, further lots and/or trade with the supplier. ▪ Check traceability and compliance with duty of care obligations, and seek the source of contamination. ▪ Take measures to prevent future incidents of contamination. 	<ul style="list-style-type: none"> ▪ Notify the inspection body outside of Switzerland. ▪ Check traceability and compliance with duty of care obligations, and seek the source of contamination. ▪ Take measures to prevent future incidents of contamination.
B	<ul style="list-style-type: none"> ▪ Suspend trade of these and, if applicable, all other lots of the same product and origin (e.g. supplier, producer) in consultation with the certification body. ▪ Notify Bio Suisse and the organic certification body (via the Notification form for residues in Bud products) and also provide your own statement and a statement from the supplier. 	<ul style="list-style-type: none"> ▪ Check traceability and compliance with duty of care obligations. ▪ Provide confirmation of receipt to licensee. ▪ Seek the source of contamination and take measures to prevent future incidents of contamination. 	<ul style="list-style-type: none"> ▪ Check traceability and compliance with duty of care obligations in accordance with the directive issued by the FOAG/FSVO in consultation with Bio Suisse. ▪ Temporarily or permanently halt trade of the product, further lots and/or trade with the supplier in consultation with the licensee in accordance with the directive issued by the FOAG/FSVO. ▪ Make decision regarding trade (OFO and the Bud). ▪ If necessary, take measures to prevent future incidents of contamination. 	<ul style="list-style-type: none"> ▪ Notify the inspection body outside of Switzerland. ▪ In consultation with Bio Suisse and the CB of the Swiss operation, check traceability and compliance with duty of care obligations, and seek the source of contamination. Take measures to prevent future incidents of contamination.
C	<ul style="list-style-type: none"> ▪ Suspend these lots in consultation with the certification body. ▪ Notify Bio Suisse and the organic certification body (via the Notification form for residues in Bud products) and 	<ul style="list-style-type: none"> ▪ Check traceability. ▪ Provide confirmation of receipt to licensee. ▪ If necessary, take measures to prevent future incidents of contamination (e.g. 	<ul style="list-style-type: none"> ▪ Check traceability and compliance with duty of care obligations in accordance with the directive issued by the FOAG/FSVO. 	<ul style="list-style-type: none"> ▪ If warranted, notify the inspection body outside of Switzerland. ▪ If required by the CB of the Swiss operation, or if suspicion exists, check traceability and compliance with duty

	<p>also provide your own statement and a statement from the supplier.</p>	<p>in the event of multiple residues, recurrences or possible dilution).</p>	<ul style="list-style-type: none"> ▪ Temporarily or permanently halt trade of the product, further lots and/or trade with the supplier in consultation with the licensee in accordance with the directive issued by the FOAG/FSVO. ▪ Make decision regarding trade (OFO and the Bud). ▪ If necessary, take measures to prevent future incidents of contamination. 	<p>of care obligations, and seek the source of contamination.</p> <ul style="list-style-type: none"> ▪ If necessary, take measures to prevent future incidents of contamination in consultation with Bio Suisse.
D	<ul style="list-style-type: none"> ▪ Notify Bio Suisse (Simplified notification form for residues in Bud products, German and French only). ▪ Notify the organic certification body in accordance with any agreements. 	<ul style="list-style-type: none"> ▪ Check traceability. ▪ Provide confirmation of receipt to licensee. ▪ If necessary, take measures to prevent future incidents of contamination (e.g. in the event of multiple residues, recurrences or possible dilution). 	<ul style="list-style-type: none"> ▪ Check traceability and compliance with duty of care obligations in accordance with the directive issued by the FOAG/FSVO. ▪ If necessary, temporarily or permanently halt trade of the product in accordance with the directive issued by the FOAG/FSVO. ▪ Possibly make decision regarding trade (OFO and the Bud). 	<ul style="list-style-type: none"> ▪ If necessary, take measures to prevent future incidents of contamination in consultation with Bio Suisse.
E	<ul style="list-style-type: none"> ▪ No notification to Bio Suisse is necessary. ▪ Notify the organic certification body in accordance with any agreements. 	<ul style="list-style-type: none"> ▪ None 	<ul style="list-style-type: none"> ▪ As prescribed by the OFO. 	<ul style="list-style-type: none"> ▪ None

Exceptions and special cases

Table 3 shows Bio Suisse's stance on assessing exceptions and special cases. The procedures described below are based on the procedures given in Table 1 on page 3. If the tolerance threshold as prescribed by the PestRO is reached, then procedure A applies. The confirmation of organic status by the certification body (in consultation with the responsible enforcement agency, if necessary) serves as the basis for trading under the Bud logo. Their policies may differ from those of Bio Suisse.

Contamination that is subject to foodstuff legislation and does not violate any requirements of the Bio Suisse Standards must be assessed in terms of food safety by the responsible enforcement agency. More information about specific contaminants is provided in Table 3.

Multiple residues

During its assessment, Bio Suisse acknowledges that cases of residue in which two or more substances or GMOs are simultaneously detected may increase the risk of a breach of duty of care obligations or a violation.

Recurrences

During its assessment, Bio Suisse acknowledges that recurrent residues in products of the same origin may increase the risk of a breach of duty of care obligations or a violation.

Products from multiple producers/suppliers

During its assessment, Bio Suisse acknowledges that residues in products from multiple producers/suppliers may pose a risk of dilution of the residue concentration compared to the initial product and may increase the risk of a breach of duty of care obligations or a violation.

Table 3: Exceptions and special cases

Substance	Assessment according to Bio Suisse	Explanations/comments
Plant protection products permitted in organic farming (e.g. spinosad and azadirachtin)	Residue concentration < tolerance threshold, active ingredient as prescribed by the Input List of the FiBL for the crop is not permitted: procedure D; however, measures to prevent future incidents of contamination must be taken.	Applies to active ingredients permitted in accordance with the EAER Ordinance on Organic Farming (SR 910.181) and in accordance with applicable requirements in the country of origin. Not applicable to fumigant agents.
	Residue concentration < tolerance threshold, active ingredient as prescribed by the Input List of the FiBL for the crop is permitted: procedure E.	
Bromide	5 mg/kg < bromide < tolerance threshold: procedure B.	Bromide levels under 5 mg/kg are assumed to be naturally occurring. Bromide levels higher than 5 mg/kg may also have natural causes. As a precaution, evidence must be furnished that neither soil sterilisation nor gasing has been carried out. Such evidence is not necessary for products that were grown, stored and processed in the EU. A documented elevated chloride/bromide ratio (approx. 50:1 or higher) suggests that the bromide may be naturally occurring, particularly in cases of former seabeds and areas in the immediate vicinity of the sea [1]. Elevated levels may naturally occur in herbs, spices, teas, brassicas and cep/porcini mushrooms [2].
	Bromide ≤ 5 mg/kg or chloride/bromide ratio > 50: procedure D.	

		Bio Suisse will decide on a case-by-case basis which measures listed under categories B and D are necessary.
Piperonyl butoxide	Piperonyl butoxide < tolerance threshold: typically procedure D.	Piperonyl butoxide is often added as a synergist to pyrethrum compounds to enhance the insecticidal effect. Residues in <u>imported</u> Bud products can result from proper use in the field or as a storage preservative. Residues in <u>domestic</u> Bud products can only result from proper use as a storage preservative. However, the use of pyrethrum compounds containing piperonyl butoxide is prohibited on agricultural operations. Measures for improvement must be examined and implemented.
Chlorpropham (germination inhibitor)	As prescribed by the decision chart Table 1.	Experience has shown that even when duty of care obligations are met, unavoidable chlorpropham contamination of up to 0.1 mg/kg can occur. Bio Suisse recommends its "Merkblatt zur Vermeidung von Kontaminationen durch unerlaubte Keimhemmungsmittel auf Knospe-Kartoffeln und Knospe-Lagergemüse" ("Information note on preventing contamination of Bud potatoes and Bud stored vegetables from germination inhibitors", German and French only).
Phosphine (PH₃)	0.02 mg/kg < phosphine < tolerance threshold: procedure B.	If PH ₃ levels are higher than 0.001 mg/kg in grain, cereals and oilseeds (including sesame, poppy seeds, etc.), the procedure in accordance with Directive 2019/2 issued by the FOAG/FSVO applies with regard to the organic status. Guidelines for good manufacturing practices with regard to phosphine residues in organic cereals ("Leitfaden GHP zu Phosphin-Rückständen bei Bio-Getreide", German and French only) can be accessed on the IG BIO website .
	0.01 mg/kg < phosphine < 0.02 mg/kg: procedure C.	
	0.001 mg/kg < phosphine < 0.01 mg/kg: procedure D; however, the certification body will decide on a case-by-case basis, possibly in consultation with the responsible enforcement agency.	
Fungicides in wine and wine grapes	Concentration of at least one active ingredient > 0.02 mg/l, sum of all active ingredients > 0.06 mg/l: procedure B.	Multiple residues occur more often in wine than in other products [3]. The benchmark values given here were derived from a comprehensive study [4]. Bio Suisse factors the respective drift situation into its assessment. Residues cannot always be entirely avoided. Slight traces of residues in Bud products can be tolerated, provided standards and duty of care obligations are met. Bio Suisse recommends the FiBL information note "Pestizidrückstände in Biowein: Wie vermeiden?" ("Avoiding pesticide residues in organic wine", German and French only).
	0.01 mg/l < concentration of the active ingredients ≤ 0.02 mg/l, sum of all active ingredients > 0.03 mg/l: procedure C.	
	Concentration of the active ingredients ≤ 0.01 mg/l and sum of all active ingredients ≤ 0.03 mg/l: procedure D.	
Glyphosate	Glyphosate > 0.05 mg/kg: procedure B.	This only applies to imports from North America. Due to the widespread use of glyphosate in non-organic agriculture, Bud products from North America may contain traces of glyphosate of up to 0.05 mg/kg as a result of technically unavoidable contamination [5].
	0.01 mg/kg < glyphosate ≤ 0.05 mg/kg: procedure C.	
	Glyphosate ≤ 0.01 mg/kg: procedure D.	
Permethrin in products from tropical countries	Permethrin > 0.04 mg/kg: procedure B.	Permethrin residues in products from tropical countries may be caused by protective measures against malaria (e.g. mosquito repellents). This is not a
	Permethrin ≤ 0.04 mg/kg: procedure D.	

		violation of the Bio Suisse Standards, and levels of up to 0.04 mg/kg are therefore tolerated.
Anthraquinone (in dried herbs, teas and spices)	Anthraquinone \geq 0.02 mg/kg: procedure B.	<p>The following public statement was issued by the Bundesverband Naturkost Naturwaren e.V. (BNN) on the use of the BNN benchmark value for detected biphenyl and anthraquinone residues in organic herbs, spices, herbal teas and tea (<i>Camellia sinensis</i>): <i>in the opinion of the Scientific Advisory Board, levels of up to 0.02 mg anthraquinone per kilogramme of examined product can be considered accidental or unavoidable in terms of this statement</i> [6].</p> <p>In cases where concentrations pose no health risk and there is no suspicion of improper usage, Bio Suisse is of the opinion that trade under the Bud logo is possible even in the event of higher concentrations.</p>
	0.01 mg/kg < anthraquinone < 0.02 mg/kg: procedure C.	
	Anthraquinone \leq 0.01 mg/kg: procedure D.	
Biphenyl (in dried herbs, teas and spices)	Biphenyl \geq 0.05 mg/kg: procedure B.	<p>The following public statement was issued by the Bundesverband Naturkost Naturwaren e.V. (BNN) on the use of the BNN benchmark value for detected biphenyl and anthraquinone residues in organic herbs, spices, herbal teas and tea (<i>Camellia sinensis</i>): <i>in the opinion of the Scientific Advisory Board, levels of up to 0.05 mg biphenyl per kilogramme of examined product can be considered accidental or unavoidable in terms of this statement</i> [6].</p> <p>In cases where concentrations pose no health risk and there is no suspicion of improper usage, Bio Suisse is of the opinion that trade under the Bud logo is possible even in the event of higher concentrations.</p>
	IL < biphenyl < 0.05 mg/kg: procedure C.	
	Biphenyl \leq IL: procedure D.	
Phthalimide	As prescribed by the decision chart Table 1.	<p>The assessment takes into account that phthalimide is not only a by-product of folpet, but can also be formed from phthalic acid or phthalic anhydride. These substances are ubiquitous in the environment and especially in house dust. Heat-dried products are particularly affected [7].</p> <p>For further information, see the Bio Suisse white paper entitled "Informationen und Stellungnahme zu Rückständen von Phthalimid und «Folpet (Summe)»" ("Information and statement on residues of phthalimide and folpet (total)", German only).</p>
Organochlorine pesticides in cucurbit crops	Residue concentration \geq tolerance threshold: procedure A.	<p>The main cause of organochlorine pesticides detected in cucurbit crops is attributable to pre-existing contamination of the soil [8]. In particular, the seeds and the oil are affected. This does not violate the Bio Suisse Standards. Therefore, residues of organochlorine pesticides from pre-existing contamination are tolerated up to the tolerance threshold. If necessary, measures for improvement must be defined and implemented.</p>
	Residue concentration < tolerance threshold: procedure D.	
Organochlorine pesticides in seeds of cucurbit crops (not intended for human consumption)	Typically procedure D.	<p>The main cause of organochlorine pesticides detected in cucurbit crops is attributable to pre-existing contamination of the soil [8]. In particular, seeds are affected. This does not violate the Bio Suisse Standards. Organochlorine pesticide residues detected in seeds of cucurbit crops that are not intended for human consumption are therefore tolerated.</p>

DEET in products from tropical countries	DEET > 0.1 mg/kg: procedure B.	DEET residues in products from tropical countries may be caused by protective measures against illnesses (e.g. mosquito repellents against malaria). This is not a violation of the Bio Suisse Standards, and levels of up to 0.1 mg/kg are therefore tolerated, provided that the measures listed in the Bio Suisse white paper entitled " Informationen und Stellungnahme zu Rückständen von DEET " ("Information and statement on residues of DEET", German only) are observed. Products that do not originate from tropical countries are assessed by Bio Suisse on a case-by-case basis and take into account the fact that DEET can also be used against pests such as ticks.
	IL < DEET ≤ 0.1 mg/kg: procedure D.	
Chlorate/perchlorate	Chlorate/perchlorate > 0.05 mg/kg: procedure B.	Organic and non-organic products appear to be equally affected, which leads us to conclude that chlorate and perchlorate residues are a ubiquitous pollution that is not specific to organic production and does not constitute a violation of organic standards. The most probable cause of current chlorate and perchlorate residues is the use of chlorinated water or water containing environmental pollutants as irrigation water or for processing [9] [10]. Specific tolerance thresholds apply to chlorate [11] and perchlorate [12] in the EU since 2020. Switzerland has so far adopted the EU's tolerance thresholds for chlorate (last updated: December 2021).
	IL < chlorate/perchlorate ≤ 0.05 mg/kg: procedure C.	
Dithiocarbamate	As prescribed by the decision chart Table 1.	Some plants contain naturally occurring sulphur or carbon-sulphur compounds that interfere with testing and may give the appearance that they contain dithiocarbamates. For example, this is the case with cabbage (brassicaceae) and leek varieties (allium species). This is taken into account during the assessment of residues. For further information, see the Bio Suisse white paper entitled " Informationen und Stellungnahme zu Rückständen von Dithiocarbamaten " ("Information and statement on residues of dithiocarbamates, German only).
Seed (not intended for human consumption)	Residue concentration > 0.02 mg/kg: typically procedure B.	Tolerance thresholds as prescribed by the PestRO do not apply to seed.
Phosphonic acid (phosphonate)	Phosphonic acid > 0.1 mg/kg for perennial crops, or 0.05 mg/kg for annual and biennial crops: procedure B.	Experience has shown that even when duty of care obligations are met, unavoidable phosphonic acid contamination can occur. According to the fact sheet published by the BNN: <i>If no fosetyl itself is detected, then there is no reasonable cause to suspect that the phosphonic acid detected is a result of unauthorised use of fosetyl-Al</i> [13]. However, this does not rule out the use of phosphonate. The causes must be clarified and measures for improvement must be implemented for residues below 0.1 mg/kg or 0.05 mg/kg, respectively.
	IL < phosphonic acid ≤ 0.1 mg/kg for perennial crops, or 0.05 mg/kg for annual and biennial crops: procedure C.	

		For further information, see the Bio Suisse white paper entitled " Information and statement on phosphonate/phosphonic acid residues ".
Synthetic antioxidants (SOX) in fish feed, fish meal and fish oil	3 mg/kg < total SOX level: procedure B.	Levels up to 3 mg/kg indicate contamination rather than added SOX in feed. Possible sources of contamination: – Certain vitamins (mainly vitamins A and D) are stabilised with SOX. From a nutritional point of view, these vitamin mixtures are indispensable in feed. – Cross-contamination can occur in organic feed, fish meal or fish oil if feed mills produce in both organic and non-organic quality. Organic and non-organic products are kept separated via temporal separation and appropriate cleaning procedures, purge batches, etc. However, despite such separation measures, undesired contamination can occur. For further information, see the Bio Suisse white paper entitled " Information and Bio Suisse's position on residues of synthetic antioxidants in fish and fish feed ". SOX levels in fish meat are assessed as prescribed by the decision chart Table 1.
	Total SOX level ≤ 3 mg/kg: procedure D.	
Ethoxyquin dimer in fish meat	Ethoxyquin dimer > 0.02 mg/kg: procedure B.	Experience has shown that even when duty of care obligations are met, unavoidable ethoxyquin contamination of up to 0.02 mg/kg can occur.
	Ethoxyquin dimer ≤ 0.02 mg/kg: procedure D.	
Substances that require special sample preparation (e.g. hydrolysis)	If any of these substances are detected, an analysis must be conducted after previous acidic hydrolysis. The final assessment will depend on the results of this analysis.	These substances can only be partially detected by standard pesticide screening. In such cases, pesticide screening only indicates whether the substances are present or not. To determine the amount, the test must be repeated on specially prepared samples. This applies to the following active ingredients: 2,4-D, 2,4,5-T, 2-phenylphenol, acibenzolar acid, amitraz, bentazone, bifenazate, bromoxynil, captan, carbenazim, carbofuran, clethodim, clodinafop, cycloxydim, dalapon, daminozide, dazomet, dicamba, dichlorprop, diclofop, dinocap, dinoseb, dinoterb, dithiocarbamate, DNOC, ethofumesate, fenoprop, fenoxaprop-P, flufenacet, fluazifop, fluopyram, fluroxypyr, folpet, haloxyfop, isoxaflutole, ioxynil, MCPA, MCPB, mecoprop, meptyldinocap, phosphane, prochloraz, propachlor, pyridate, quizalofop and tepraloxydim. For further information, see the Bio Suisse information note entitled " Spectrum of analyses for detecting pesticide residues in organic products ".
Residues in leaf samples (not intended for human consumption)	As prescribed by the decision chart for leaf material in organic farms (" Entscheidungsraster zur Beurteilung von Rückständen auf Blattmaterial von Knospe-Betrieben ", German only).	Experience has shown that different values must be used for leaf samples than for foods (e.g. in the event of drift).
GMOs (in imported products)	GMO level > 0.9% if approved GMOs, or 0.5% if tolerated GMOs: procedure A.	GMO residues are assessed according to the Feedstuffs Book Ordinance (FMV SR 916.307) and the FDHA Ordinance on Genetically Modified Foodstuffs (SR 817.022.51). In Switzerland there is a labelling requirement if the level of a permitted GMO exceeds 0.9%. Some GMOs are not permitted, but are tolerated
	0.1% < GMO level ≤ 0.9% if approved, or 0.5% if tolerated: procedure B.	

	GMO level \leq 0.1 % if approved or tolerated GMOs: procedure E.	up to a level of 0.5%. Bio Suisse applies these values as threshold values, provided that duty of care obligations (e.g. preventative measures, separation, etc.) are observed. Residues exceeding 0.1% require in-depth clarification. Traces of GMOs that are neither approved nor tolerated always require notification and are assessed by Bio Suisse on a case-by-case basis. Notifications to the certification body must be made in accordance with any agreements with the certification body. For further information, see the Bio Suisse web page on GMOs .
GMOs (in domestic products from field crops)	GMO level > 0.1%: procedure A.	In Switzerland the current moratorium on the cultivation of genetically modified organisms (GMOs) allows for no coexistence. Therefore, the 0.1% limit for domestic products is also the threshold value applied by Bio Suisse. Notifications to the certification body must be made in accordance with any agreements with the certification body. For further information, see the Bio Suisse web page on GMOs .
	GMO level \leq 0.1%: procedure D.	
Radioactivity (various radionuclides)	Radionuclides level > the tolerance threshold as prescribed by the FDHA or FSVO ordinances: procedure A.	Bio Suisse has specific requirements regarding the testing of products which carry a heightened risk of contamination (see the Bio Suisse Standards, Appendix to part V, section 1.8) and " Analysis requirements for Bud products from areas that may be affected by nuclear reactor accidents ". The following Swiss ordinances apply to the assessment of detected contamination: – Tolerance thresholds in the event of nuclear accidents or other radiological emergencies: FDHA Ordinance on the Maximum Levels for Contaminants (SR 817.022.15) (Kontaminantenverordnung, VHK) – Tolerance thresholds for food which is contaminated with caesium 134 and 137 as a result of the accident at the nuclear power plant in Chernobyl: FSVO Ordinance on the Importation and Placing on the Market of Food Which is Contaminated with Caesium as a Result of the Accident at the Nuclear Power Plant in Chernobyl (SR 817.022.151) (Chernobyl Ordinance) – Tolerance threshold for food items sourced from or originating in Japan: FSVO Ordinance on the Importation of Food Sourced from or Originating in Japan (SR 817.026.2)
	Radionuclides level \leq the tolerance threshold as prescribed by the FDHA or FSVO ordinances: procedure D.	
Secondary plant substances (e.g. pyrrolizidine alkaloids and tropane alkaloids)	Assessment as prescribed by food laws and regulations.	These residues do not violate Bio Suisse Standards, but must be assessed in terms of food safety by the responsible enforcement agency. Specific tolerance thresholds have been established in the EU [14] [15].
Microbiological contamination	Assessment as prescribed by food laws and regulations.	These residues do not violate Bio Suisse Standards, but must be assessed in terms of food safety by the responsible enforcement agency.

		The FDHA Ordinance on Hygiene in the Handling of Foodstuffs (SR 817.024.1) (Hygieneverordnung EDI) applies.
Heavy metals	Assessment as prescribed by food laws and regulations.	<p>Heavy metal residues in food with the Bud logo do not violate Bio Suisse Standards, but must be assessed in terms of food safety by the responsible enforcement agency.</p> <p>External compost and solid recycled fertiliser must conform to the heavy metal concentration limit values set out in the Ordinance on the Reduction of Risks relating to the Use of Certain Particularly Dangerous Substances, Preparations and Articles (SR 814.81, ORRChem).</p>
PCBs/dioxins	Assessment as prescribed by food laws and regulations.	<p>These residues do not violate Bio Suisse Standards, but must be assessed in terms of food safety by the responsible enforcement agency.</p> <p>The FDHA Ordinance on the Maximum Levels for Contaminants (SR 817.022.15) (Kontaminantenverordnung, VHK) applies.</p>

Sources

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